Alberta Diabetes Strategy

2003-2013

STRATEGY

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Alberta
HEALTH AND WELLNESS

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ALBERTA DIABETES STRATEGY OVERVIEW

In order to address the prevention, care and management of diabetes in a coordinated and comprehensive manner, the following summarizes Alberta Health and Wellness' approach.

Primary Prevention of Type 2 Diabetes

- **Diabetes Prevention/Health Promotion**

  Alberta Health and Wellness has developed a 10-year Alberta Diabetes Prevention Strategy in collaboration with a large group of stakeholders including the Canadian Diabetes Association (CDA). Implementation of the Alberta Diabetes Prevention Strategy, includes providing a grant to the CDA for:

  1) work with key stakeholders to develop a provincially organized, community based education initiative, including Aboriginal populations, focused on the prevention of type 2 diabetes; and

  2) collaborate with the Chinook Health Authority and the Clinical Practice Guidelines Program, administered by the Alberta Medical Association and other key stakeholders, to provide an educational tool for physicians and individuals with diabetes.

Secondary and Tertiary Prevention of Diabetes

- **Monitoring and Provision of Diabetic Supplies**

  Since 1991, the Alberta Monitoring for Health Program (AMFH) has provided financial assistance for diabetic supplies for insulin dependent Albertans not having private insurance. AMFH is operated by the Canadian Diabetes Association (CDA) and funded through a grant of $2,616,000 from the department. The AMFH program will be enhanced by increasing the Alberta Health and Wellness grant to CDA by **$8.0 M** (for a total of $10.6 M) for diabetic supplies: (needles, syringes, lancets and test strips). This will include expanding AMFH criteria to include diabetics who are not insulin dependent (i.e diet and/or oral hypoglycemics). Criteria will need to be developed to ensure that Albertans most in need will receive access to funds.

- **Screening for Diabetes and its Complications for Aboriginal Populations Living off Reserves** ($1 M)

  Alberta Health and Wellness will work in partnership with Aboriginal organizations and other key stakeholders to develop and implement a diabetes screening program for Aboriginal populations living off reserve.

- **Diabetes Care and Management**

  Working in partnership, with the pharmaceutical sector and related stakeholders, to develop a disease management approach for those individuals with diabetes with a focus on keeping individuals healthy and preventing further complications. Funding is yet to be determined, but will potentially be cost shared with industry.

Introduction

Diabetes is a serious, chronic health condition and is viewed as a major cause of and contributor to extensive morbidity and mortality among Albertans. Diabetes mellitus is a condition resulting from an inability of the body to sufficiently produce and/or properly use insulin. It is classified into three main types:

- **Type 1 diabetes**—Typically occurs in childhood or adolescence and is characterized by the inability of the pancreas to produce insulin. It accounts for 5-10% of all diagnosed cases of diabetes.
- **Type 2 diabetes**—Typically begins after age 40, as a result of resistance to insulin's action followed by the pancreas failing to produce insulin. It accounts for 90-95% of all diagnosed diabetes.
- **Gestational diabetes**—A form of glucose intolerance that appears during pregnancy. Usually this form of diabetes is transient, disappearing by six weeks postpartum. Some evidence indicates that women with gestational diabetes are at increased risk of developing type 2 diabetes.

Diabetes affects the lives of thousands of Albertans annually. **As a result, the Alberta Government is committed to developing a provincial diabetes strategy to reduce the risk of developing diabetes and related complications. The Alberta Government is committed to its implementation.**

Alberta's strategy focuses on the primary prevention of type 2 diabetes, the most common type of diabetes and one that is largely preventable. Epidemiological research has shown that key risk factors for type 2 diabetes—physical inactivity, obesity, and dietary factors—may be modified by focusing on healthy living practices directed at healthy eating and active living. Consequently, primary prevention is the focus and key to reducing the risk of developing type 2 diabetes.

Alberta's strategy also addresses the challenges faced by those who have already been diagnosed with diabetes. Addressing the management needs of those with diabetes to prevent and reduce serious complications is the focus of the secondary and tertiary preventative strategies.

Background

Significant work is underway to address the primary prevention of diabetes. Alberta's major initiatives started with the launch of the Federal Government's Canadian Diabetes Strategy (CDS). The CDS is a major initiative with four components: national co-ordination of an action plan, prevention and promotion, National Diabetes Surveillance System and the Aboriginal Diabetes Initiative. Under this strategy, funding was provided through Health Canada's Regional Prevention and Promotion Contribution Program to support diabetes projects in Alberta. In the fall of 2000, an environmental scan[1] was completed to gain an understanding of the existing diabetes programs and services in Alberta and the role being played by major stakeholders. The information from the scan provided the foundation for the diabetes consultation sessions[2] held in the spring of 2001. As well as many other stakeholders, Alberta Health and Wellness participated on the Working Group for both projects.

The consultation sessions provided a large amount of information on the challenges and strategies for preventing or reducing the risk factors for type 2 diabetes. Although primary prevention was the focus for the consultation sessions, secondary and tertiary prevention were also addressed given the concerns of those already affected by diabetes. Perspectives on the roles and responsibilities of stakeholders in addressing diabetes prevention were also collected. As a result, the consultation sessions provided a solid foundation for developing the diabetes prevention strategy for Alberta.

Additional diabetes initiatives are also underway at the provincial and national level. The Canadian Diabetes Strategy is funding numerous diabetes prevention projects. In November 2001 a Federal/Provincial/Territorial Co-ordinating Committee was struck to develop a National Diabetes Strategy. This strategy will focus on five theme areas: prevention, care, research, surveillance, and education.

Diabetes is also included in discussions regarding a chronic disease prevention strategy for the province. In March 2002, a number of stakeholders in Alberta participated in a forum, Preventing Chronic Disease: Working Together in an Integrated Approach, that focused on opportunities for developing and implementing an integrated chronic disease prevention and health promotion strategy for Alberta. Integrated approaches among stakeholders to address risk factors common to preventing a number of chronic diseases were discussed.

Regional health authorities are also involved in developing regional diabetes strategies that address primary prevention and the management of those with diabetes. All of these efforts speak well for progress in preventing or reducing the risk of diabetes in Alberta.

The Diabetes Situation in Canada and Alberta

Diabetes is a chronic disease that affects the lives of many Canadians. Over 1.2 million Canadians are currently living with diabetes. Further, estimates indicate that one-third of the general population with diabetes is unaware that they have diabetes. Diabetes is two and a half times more prevalent in the Aboriginal population than the population at large. In Canada, more than 60,000 new cases of diabetes are diagnosed each year. Forty percent of those with diabetes develop long-term complications. Diabetes is ranked as the seventh leading cause of death in Canada. The health care costs of diabetes are estimated to be about $9 billion annually[3].

In Alberta, the following information is known about diabetes[4]:

- In 2000, approximately 100,000 Albertans were diagnosed with diabetes, representing an age-standardized prevalence of 3.66% and an age-standardized incidence of 4.54 per 1,000 population at risk. Projections indicate that the number of Albertans living with diabetes will double over the next 15 years.
- The age-standardized prevalence for the First Nations population is 8.54%.
- Prevalence of diabetes increases with age. Albertans over the age of 65 have a three-fold greater prevalence than those under 65.
- Alberta's age standardized mortality rate for diabetes in 1999 was 13.5 per 100,000 population. The number of deaths attributed to diabetes is estimated to be several times higher than the current figures as people are more likely to die from its complications (heart disease, renal failure, etc.).
- In 1999/2000 fiscal year, over 2,800 Albertans were hospitalized for treatment of diabetes.

- Of the total number of Albertans receiving care as outpatients in 1999, 3% were diagnosed with diabetes. The proportion of outpatients with diabetes is over five times higher in the 65 or older age group (10.7%) than in the under 65 age group (2.0%).

- In 1999, the average number of physician visits by those with diabetes was more than double those with other diagnoses—18.8 and 8.7 visits respectively.

- In fiscal year 2000-01, the approximate direct health care cost for an Albertan with diabetes was $2,900 per year.

- In the same fiscal year, the overall costs of diabetes to the Alberta health care system were estimated at $262.3 million. These costs included physician services (approximately $78.5 million), hospital stays (approximately $147 million), renal dialysis ($25.4 million), drugs (approximately $9 million) and supplies through the Alberta Aids to Daily Living Program/Alberta Monitoring for Health Program ($2.6 million). It should be noted that these costs did not include costs associated with lost productivity and other socio-economic and psychological burdens experienced by individuals with diabetes and their family members.

Alberta's Strategic Approach to Diabetes Prevention, Care and Mangement

The target population. In the population at large, three groups are important: those who do not have diabetes, those who have diabetes but are unaware and those who are diagnosed with diabetes.

Those who do not have diabetes are the majority of the population. Keeping these individuals healthy and preventing the disease is a priority. Preventing diabetes demands increased attention to those risk factors believed to be major contributors to diabetes, namely obesity and physical inactivity. Prevention initiatives are targeted at healthy living and address the barriers to healthy eating and physical activity.

Those who have diabetes but are unaware constitute a group of individuals in whom the disease is developing but symptoms of diabetes are undiagnosed. The onset of diabetes is a gradual process. Initially the individual experiences few if any symptoms. Hence, a proportion of those with type 2 diabetes are presumed to be undiagnosed with some estimates as high as 50%[5]. Preventative measures are aimed at testing for diabetes by using a fasting blood glucose (FBG) test. The FBG test is recommended every three years in those over 45 years of age by the clinical practice guidelines published by the Canadian Medical Association and the Canadian Diabetes Association in 1998[6]. These guidelines, which are currently under review, address more frequent testing for those with specific risk factors.

For those who are diagnosed, management of the disease is very important, as diabetes cannot be cured. Effective management addresses self-care and optimal metabolic control to avoid the development of complications, which can be debilitating and life threatening.

The interventions—comprehensive. Alberta's strategy targets all age groups by focusing on primary prevention and addressing secondary and tertiary prevention:

- **Primary prevention** targets the well population, those who have not been diagnosed with diabetes. The intent of primary prevention is to keep those people healthy and to prevent them from acquiring the disease. As a result, primary prevention involves stopping or delaying the development of the disease. It includes the promotion of health by personal and community-wide efforts directed toward the improvement of the general well-being of the individual while also involving specific protection against selected diseases.

- **Secondary prevention** targets those who may be at risk of diabetes where efforts are directed at detecting the disease while it is in its early stages and before any major complications occur. For those diagnosed with the disease, measures are undertaken to help them manage their disease effectively to prevent any major complications. At this point, the preventative measures become tertiary.

- **Tertiary prevention** targets those who are already diagnosed with diabetes. The focus of tertiary prevention is to prevent or delay any complications that may result from diabetes. Tertiary prevention is aimed at effective management of diabetes and focuses on glycemic control, regular foot and eye examinations and education on self-care of the disease.

The overall strategic approach—population health. Significant numbers of individuals are at risk of developing diabetes. Consequently, diabetes is regarded as a population health issue that requires a population health approach. Broad strategies need to be considered in reducing the incidence of diabetes, especially type 2 diabetes. Simply isolating the health status of an individual is insufficient to prevent diabetes. It is well known that multiple factors affect an individual's health and overall well being. A population health approach acknowledges the influence of these factors, typically referred to as determinants of health. These factors, which are interrelated are: income and social status; social support networks; education; employment and working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; biology and genetic endowment; health services; gender; culture.

The determinants of health are prominent when considering the risk factors contributing to diabetes. For example, low income/poverty and low educational levels may adversely affect the capacity of individuals and families to choose and purchase healthy foods and to participate in physical activity programs. Environments need to support individuals, families and communities in making the necessary choices to live healthier lives. A population health approach focuses on all these factors and incorporates multiple strategies and stakeholders to address them.

Chronic disease prevention—a related strategic thrust. Awareness is increasing about the risk factors that are common to a number of chronic diseases, including diabetes, and the need for stakeholders to take an integrated and collaborative approach to their disease prevention and health promotion initiatives. Consequently, efforts are underway by a broad range of stakeholders to address an integrated approach to the development of a chronic disease prevention and health promotion strategy for Alberta. A provincial forum[7], sponsored by the Canadian Diabetes Association and funded by Health Canada and Alberta Health and Wellness, was held in March 2002 to examine integrated approaches to chronic disease prevention and health promotion. The outcomes of this forum will be used to further explore and advance an integrated approach to a chronic disease prevention and health promotion strategy for Alberta.

Appendix A

Overview of Alberta's Diabetes Prevention Strategies, Objectives and Key Measures

Overview of Alberta's diabetes prevention strategies, objectives and key measures

Strategy		Objective	Key Measures
1.0	Increase programs and services aimed at strengthening healthy living practices	Strengthened healthy living practices by improving healthy eating and active living among Albertans.	1. Proportion of Albertans who report healthy body weights. 2. Proportion of Albertans who eat nutritious diets in accordance with Canada's Food Guide to Healthy Eating. 3. Proportion of Albertans who engage in health-enhancing physical activity in accordance with Canada's Physical Activity Guides. 4. Number and type of programs and services focused on healthy eating. 5. Number and type of programs and services focused on active living. 6. Proportion of population participating in programs and services focused on healthy eating. 7. Proportion of population participating in programs and services focused on active living.
2.0	Enhance public awareness and education about healthy living	Increased public awareness and understanding about healthy living practices.	1. Level of public awareness about the risk factors contributing to diabetes. 2. Availability of public education about risk factors and healthy living practices. 3. Public participation levels in educational programs.
3.0	Address the impact of low income and education on diabetes prevention	Minimized barriers to healthy living related to low income and education.	1. Number and type of programs instituted to address barriers related to low income and education. 2. Number and type of public policies instituted to address barriers related to low income and education. 3. Number and type of organizations collaborating to address barriers related to low income and education.

Overview of Alberta's diabetes prevention strategies, objectives and key measures (Continued)

Strategy		Objective	Key Measures
4.0	Strengthen professional knowledge, skills and practices in diabetes primary prevention	Enhanced professional leading practices and interdisciplinary teamwork in the primary prevention of type 2 diabetes.	1. Proportion of professionals involved in interdisciplinary promotion and education initiatives/programs directed at diabetes prevention. 2. Proportion of professionals using leading practices for the primary prevention of diabetes. 3. Number and type of interdisciplinary diabetes prevention programs. 4. Number and type of interdisciplinary chronic disease prevention programs that may have an effect on the prevention of diabetes.
5.0	Address diabetes primary prevention needs of the Aboriginal population	Increased intersectoral and integrated diabetes primary prevention initiatives for Aboriginal peoples.	1. Number and type of programs that support primary prevention of diabetes among Aboriginal peoples. 2. Proportion of Aboriginal peoples participating in programs aimed at primary prevention of diabetes.
6.0	Strengthen professional knowledge, skills and practices in the education and management of diabetes	Enhanced professional leading practices and interdisciplinary teamwork in the education and management of diabetes.	1. Proportion of professionals using the most current recommendations according to the Clinical Practice Guidelines for the Management of Diabetes in Canada. 2. Proportion of professionals involved in interdisciplinary/intersectoral promotion and education initiatives aimed at diabetes. 3. Number and type of interdisciplinary/intersectoral promotion and education initiatives aimed at diabetes. 4. Number and type of interdisciplinary/intersectoral diabetes management programs and initiatives.

Overview of Alberta's diabetes prevention strategies, objectives and key measures (Continued)

Strategy		Objective	Key Measures
7.0	Implement appropriate screening, education, management and support services for those with diabetes	Strengthened self-care and supportive environments for effective diabetes education and management.	1. Proportion of Albertans who are screened for diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada. 2. Proportion of Albertans applying the most current recommendations for the management of diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada. 3. Number and type of diabetes education, management, and support initiatives and programs. 4. Participation in diabetes education, management and support initiatives and programs. 5. Level of public awareness and understanding about the facts of diabetes and the needs of those with diabetes.
8.0	Address management of diabetes in the Aboriginal population	Increased intersectoral and integrated diabetes management and education initiatives, programs and services to Aboriginal peoples.	1. Number and type of programs that support diabetes management and education among Aboriginal peoples. 2. Proportion of Aboriginal peoples participating in programs aimed at diabetes management and education. 3. Number and type of complications due to diabetes within the Aboriginal Community. 4. Proportion of Aboriginal peoples who are screened for diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada.
9.0	Facilitate and support diabetes evaluation, research and surveillance initiatives	Increased research and surveillance on the prevention and management of diabetes.	1. Implementation of comprehensive diabetes surveillance system by 2007. 2. Uniform collection and submission of standard diabetes data by relevant stakeholders. 3. Volume and type of research initiatives being funded. 4. Volume and type of diabetes program evaluations being conducted. 5. Participation levels of key stakeholders in research and evaluation initiatives.

Endnotes

[1]Blair, C. and Gustafson, C. (February 2000). Diabetes Environmental Scan for Alberta. Edmonton, Alberta: KPMG Consulting. http://www.dietitians.ca/resources/alberta_diabetes_scan.htm.

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[7] Canadian Diabetes Association. (March 2002). Preventing Chronic Disease: Working Together in An Integrated Approach. Edmonton, Alberta.

Alberta Diabetes Strategy:

Prevention Component 2003-2013

PREVENTION

May 2003

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The Alberta Diabetes Prevention Strategy is the culmination of the efforts of many people. The foundation of the strategy was built on the information obtained from the Diabetes Consultation Sessions that were held across the province in February and March 2001. Our thanks to all participants for sharing their expertise and experience and giving their time to provide their perspectives on a provincial diabetes prevention strategy.

The Alberta Diabetes Prevention Strategy Working Group, charged with the development of the diabetes prevention strategy, worked diligently to produce this document. Our thanks and appreciation are extended to all members for their thoughtful consideration of the future direction for diabetes prevention in Alberta and for sharing their expertise, experience and time. A listing of the membership of the Working Group is given in Appendix A.

Other stakeholders involved in the Alberta Diabetes Prevention Strategy also reviewed the document regarding the roles and responsibilities identified for their involvement in implementing the strategy. These stakeholders were Alberta Community Development, Alberta Learning, Alberta Children's Services, Alberta Human Resources and Employment, Alberta College of Pharmacists, Pharmacists Association of Alberta, and the Alberta Medical Association, including the Clinical Practices Guidelines Program. Our thanks are extended to them for giving their expertise and time to review the strategy and provide feedback.

KPMG Consulting provided consulting services for the development of the Alberta Diabetes Prevention Strategy.

Additional copies of this document may be obtained from:

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EXECUTIVE SUMMARY

Introduction

Diabetes is a serious, chronic health condition, which is viewed as a major cause of and contributor to extensive morbidity and mortality among Albertans. In 2000, approximately 100,000 Albertans were diagnosed with diabetes. In the fiscal year 2000-01, the approximate direct health care cost for an Albertan with diabetes was $2,900 with the overall costs to the health system estimated at $262.3 million. Faced with these statistics and the growing incidence of diabetes, the Alberta Government is committed to developing a provincial diabetes prevention strategy to reduce the risk of developing diabetes and related complications.

Diabetes affects the lives of thousands of Albertans annually. **As a result, the Alberta Government has developed a provincial diabetes strategy to reduce the risk of Albertans developing diabetes and related complications.** Under the overall provincial strategy there are several components, one of which is the diabetes prevention component.

Alberta's commitment to diabetes prevention is evident in the Alberta Health and Wellness Three Year Business Plan 2002-2003 to 2004-2005, which includes: implement a provincial diabetes prevention strategy under Goal 2, Objective 2.9. The diabetes prevention strategy is also consistent with the recommendations approved for implementation in the December 2001 Report of the Premier's Advisory Council on Health.

Alberta's diabetes prevention strategy focuses on the primary prevention of type 2 diabetes, the most common type of diabetes and one that is largely preventable. Epidemiological research has shown that key risk factors for type 2 diabetes—physical inactivity, obesity, and dietary factors—may be modified by focusing on healthy living practices directed at healthy eating and active living. Consequently, primary prevention is the focus and the key to reducing the risk of developing type 2 diabetes.

Alberta's strategy also addresses the challenges faced by those who have already been diagnosed with diabetes. Addressing the management needs of those with diabetes to prevent and reduce serious complications is the focus of the secondary and tertiary preventative strategies.

Alberta's Strategic Approach to Diabetes Prevention

Four features underlie the approach being taken by Alberta to develop a provincial diabetes prevention strategy. These features are:

- **The target population.** In the population at large, three groups are important: those who do not have diabetes, those who have diabetes but are unaware and those who are diagnosed with diabetes. Those who do not have diabetes are the majority of the population so the strategic thrust is to keep this population healthy. Those who have diabetes but are unaware constitute a group of individuals in whom the disease is developing but any symptoms of diabetes are undiagnosed. For these individuals, the strategic thrust is to identify and screen those who may be at risk using accepted clinical practice guidelines. For those who are diagnosed, management of the disease is very important, as diabetes cannot be cured. The strategic thrust is directed at effective management involving self-care and metabolic control.

- **The interventions—comprehensive**. Alberta's strategy targets all age groups by focusing on primary prevention and addressing secondary and tertiary prevention. Primary prevention targets the well population, those who have not been diagnosed with diabetes, with the intent of keeping those people healthy and to prevent them from acquiring the disease. Secondary prevention targets those who may be at risk of diabetes where efforts are directed at detecting the disease while it is in its early stages and before any major complications occur. Tertiary prevention targets those who are already diagnosed with diabetes to prevent or delay any complications that may result from diabetes.

- **The overall strategic approach—population health**. Everyone is at risk of developing diabetes. Consequently, diabetes is regarded as a population health issue that requires a population health approach. Broad strategies need to be considered in reducing the incidence of diabetes, especially type 2 diabetes. A population health approach acknowledges the influence of these factors, typically referred to as determinants of health such as income, education, personal health practices and coping skills, health services and culture.

- **Chronic disease prevention—a related strategic thrust.** Awareness is increasing about the risk factors that are common to a number of chronic diseases including diabetes, and the need for stakeholders to take an integrated and collaborative approach to their disease prevention and health promotion initiatives. Consequently, efforts are underway by involving a range of stakeholders to address an integrated approach to the development of a chronic disease prevention and health promotion strategy for Alberta.

Stakeholder Roles and Responsibilities

Numerous entities have a stake in diabetes prevention in Alberta. Given the major risk factors for diabetes and the multitude of other factors influencing one's overall health and well-being, an intersectoral and integrated approach is necessary to effectively address diabetes prevention. Multiple stakeholders are identified for the same or similar strategies. This reinforces the expectations of an integrated and collaborative approach given that no one stakeholder "owns" diabetes. These stakeholders are clustered into key groups:

Individuals and families
Communities, including the education system and employers
Regional health authorities
Health professionals
Not-for-profit and other community organizations
Corporate sector
Municipal government
Provincial government
Federal government

Generic roles and responsibilities for each grouping are given in Appendix G. As well, specific roles and responsibilities are identified for specific stakeholders for each of the nine strategic directions.

Overview of Alberta's Diabetes Prevention Vision, Values, Principles and Long-Term Outcomes

Alberta's diabetes prevention strategy focuses on primary prevention and also addresses secondary and tertiary prevention. Vision, values, principles and long-term outcomes are described for each major area. Exhibit 1 gives an overview.

Exhibit 1
Overview of Alberta's diabetes prevention vision, values, principles and long-term outcomes

Item	Primary Prevention	Secondary and Tertiary Prevention
Vision	Improved health for Albertans: focusing on diabetes prevention	Albertans with diabetes live healthy lives
Values	Holistic, accessible, excellence, accountable, collaborative	Holistic, accessible, excellence, accountable, collaborative
Principles	• Integration of healthy lifestyle mindset and practice into all areas of human interaction—places where people live, learn, work and play. • Multi-faceted and life stage-targeted strategies using a population health approach. • Intersectoral, interdisciplinary and integrated partnerships and shared services. • Interdisciplinary teamwork by qualified professionals. • Accessible, culturally appropriate programs and services delivered within a community development framework with multiple points of access. • An accountability framework, research and supporting database for program planning and evaluation.	• Apply a holistic approach. • Interdisciplinary and intersectoral teamwork by qualified practitioners. • Accessible and culturally appropriate diabetes management and education initiatives, addressing individual needs. • Affordable and practical self-care practices.
Long-Term Outcome	**Goal**: To reduce the incidence of type 2 diabetes. **Measure**: Incidence of type 2 diabetes in Albertans. **Target**: By 2013, decrease the incidence rate of new cases of type 2 diabetes in Albertans from 4.54 per 1,000 population at risk (Year 2000) to 4.1 per 1,000 population at risk (**10% reduction**).	**Goal**: To reduce the number and severity of complications resulting from diabetes. **Measure**: Number and severity of diabetes-related complications in people diagnosed with diabetes. **Target**: By 2013, reduce the incidence of complications such as end-stage kidney disease, cardiovascular diseases and lower extremity amputations among people with diabetes (**10% reduction**).

Overview of Alberta's Diabetes Prevention Strategies, Objectives and Key Measures

Alberta's diabetes prevention strategy describes nine strategic directions. Each strategic direction describes the overarching strategy, issue, objective, key measures and targets and gives a brief background on the issue and developments that have taken place. Each strategic direction concludes with roles and responsibilities for Alberta Health and Wellness (Part A) and for key stakeholders (Part B). Appendix E provides an overview of the overarching strategy, objective and key measures.

Summary and Next Steps

Alberta Health and Wellness, in collaboration with its stakeholders, has completed the first step in diabetes prevention by developing this strategy for diabetes prevention in Alberta. The next step involves the implementation of the generic and specific roles and responsibilities described for each stakeholder in diabetes prevention. Ongoing collaboration and networking opportunities are encouraged for all stakeholders to share their progress, their learning about leading practices, and successful approaches in addressing diabetes prevention challenges.

In moving forward, participants in the consultation processes involved in the development of this strategy also identified the need for a provincial diabetes prevention advisory group to facilitate and monitor the implementation of the Alberta Diabetes Prevention Strategy. This strategy concludes with a recommendation that Alberta Health and Wellness lead in the facilitation and ongoing monitoring of the Alberta Diabetes Prevention Strategy.

INTRODUCTION

Diabetes is a serious, chronic health condition and is viewed as a major cause of and contributor to extensive morbidity and mortality among Albertans. Diabetes mellitus is a condition resulting from an inability of the body to sufficiently produce and/or properly use insulin. It is classified into three main types:

- **Type 1 diabetes**—Typically occurs in childhood or adolescence and is characterized by the inability of the pancreas to produce insulin. It accounts for 5-10% of all diagnosed cases of diabetes.
- **Type 2 diabetes**—Typically begins after age 40, as a result of resistance to insulin's action followed by the pancreas failing to produce insulin. It accounts for 90-95% of all diagnosed diabetes.
- **Gestational diabetes**—A form of glucose intolerance that appears during pregnancy. Usually this form of diabetes is transient, disappearing by six weeks postpartum. Some evidence indicates that women with gestational diabetes are at increased risk of developing type 2 diabetes.

Diabetes affects the lives of thousands of Albertans annually. **As a result, the Alberta Government has developed a provincial diabetes strategy to reduce the risk of Albertans developing diabetes and related complications.** Under the overall provincial strategy there are several components, one of which is the diabetes prevention component.

Alberta's strategy focuses on the primary prevention of type 2 diabetes, the most common type of diabetes and one that is largely preventable. Epidemiological research has shown that key risk factors for type 2 diabetes—physical inactivity, obesity, and dietary factors—may be modified by focusing on healthy living practices directed at healthy eating and active living. Consequently, primary prevention is the focus and key to reducing the risk of developing type 2 diabetes.

Alberta's strategy also addresses the challenges faced by those who have already been diagnosed with diabetes. Addressing the management needs of those with diabetes to prevent and reduce serious complications is the focus of the secondary and tertiary preventative strategies.

A glossary of terms used throughout this document is contained in Appendix B.

Background

Significant work is underway to address the primary prevention of diabetes. Alberta's major initiatives started with the launch of the Federal Government's Canadian Diabetes Strategy (CDS). The CDS is a major initiative with four components: national coordination of an action plan, prevention and promotion, National Diabetes Surveillance System and the Aboriginal Diabetes Initiative. Under this strategy, funding was provided through Health Canada's Regional Prevention and Promotion Contribution Program to support diabetes projects in Alberta. In the fall of 2000, an environmental scan[1] was completed to gain an understanding of the existing diabetes programs and services in Alberta and the role being played by major stakeholders. The information from the scan provided the foundation for the diabetes consultation sessions[2] held in the spring of 2001. As well as many other stakeholders, Alberta Health and Wellness participated on the Working Group for both projects.

The consultation sessions provided a large amount of information on the challenges and strategies for preventing or reducing the risk factors for type 2 diabetes. Although primary prevention was the focus for the consultation sessions, secondary and tertiary prevention were also addressed given the concerns of those already affected by diabetes. Perspectives on the roles and responsibilities of stakeholders in addressing diabetes prevention were also collected. As a result, the consultation sessions provided a solid foundation for developing the diabetes prevention strategy for Alberta.

Additional diabetes initiatives are also underway at the provincial and national level. The Canadian Diabetes Strategy is funding numerous diabetes prevention projects. In November 2001 a Federal/Provincial/Territorial Coordinating Committee was struck to develop a National Diabetes Strategy. This strategy will focus on five theme areas: prevention, care, research, surveillance, and education.

Diabetes is also included in discussions regarding a chronic disease prevention strategy for the province. In March 2002, a number of stakeholders in Alberta participated in a forum, Preventing Chronic Disease: Working Together in an Integrated Approach, that focused on opportunities for developing and implementing an integrated chronic disease prevention and health promotion strategy for Alberta. Integrated approaches among stakeholders to address risk factors common to preventing a number of chronic diseases were discussed.

Regional health authorities are also involved in developing regional diabetes strategies that address primary prevention and the management of those with diabetes. All of these efforts speak well for progress in preventing or reducing the risk of diabetes in Alberta.

A chronology of the diabetes initiatives pertinent to Alberta is contained in Appendix C. Appendix D contains a listing of projects that have been funded in Alberta under the Canadian Diabetes Strategy.

The Diabetes Situation in Canada and Alberta

Diabetes is a chronic disease that affects the lives of many Canadians. Over two and a quarter million Canadians are currently living with diabetes. Further, estimates indicate that one-third of the general population with diabetes is unaware that they have diabetes. Diabetes is two and a half times more prevalent in the Aboriginal population than the population at large. In Canada, more than 60,000 new cases of diabetes are diagnosed each year. Forty percent of those with diabetes develop long-term complications. Diabetes is ranked as the seventh leading cause of death in Canada. The health care costs of diabetes are estimated to be about $9 billion annually[3].

In Alberta, the following information is known about diabetes[4]:

- In 2000, approximately 100,000 Albertans were diagnosed with diabetes, representing an age-standardized prevalence of 3.66% and an age-standardized incidence of 4.54 per 1,000 population at risk. Projections indicate that the number of Albertans living with diabetes will double over the next 15 years.
- The age-standardized prevalence for the First Nations population is 8.54%.
- Prevalence of diabetes increases with age. Albertans over the age of 65 have a three-fold greater prevalence than those under 65.
- Alberta's age standardized mortality rate for diabetes in 1999 was 13.5 per 100,000 population. The number of deaths attributed to diabetes is estimated to be several times higher than the current figures as people are more likely to die from its complications (heart disease, renal failure, etc.).
- In 1999/2000 fiscal year, over 2,800 Albertans were hospitalised for treatment of diabetes.

- Of the total number of Albertans receiving care as outpatients in 1999, 3% were diagnosed with diabetes. The proportion of outpatients with diabetes is over five times higher in the 65 or older age group (10.7%) than in the under 65 age group (2.0%).

- In 1999, the average number of physician visits by those with diabetes was more than double those with other diagnoses—18.8 and 8.7 visits respectively.

- In fiscal year 2000-01, the approximate direct health care cost for an Albertan with diabetes was $2,900 per year.

- In the same fiscal year, the overall costs of diabetes to the Alberta health care system were estimated at $262.3 million. These costs included physician services (approximately $78.5 million), hospital stays (approximately $147 million), renal dialysis ($25.4 million), drugs (approximately $9 million) and supplies through the Alberta Aids to Daily Living Program/Alberta Monitoring for Health Program ($2.6 million). It should be noted that these costs did not include costs associated with lost productivity and other socio-economic and psychological burdens experienced by individuals with diabetes and their family members.

Alberta's Strategic Approach to Diabetes Prevention

The target population. In the population at large, three groups are important: those who do not have diabetes, those who have diabetes but are unaware and those who are diagnosed with diabetes.

Those who do not have diabetes are the majority of the population. Keeping these individuals healthy and preventing the disease is a priority. Preventing diabetes demands increased attention to those risk factors believed to be major contributors to diabetes, namely obesity and physical inactivity. Prevention initiatives are targeted at healthy living and address the barriers to healthy eating and physical activity.

Those who have diabetes but are unaware constitute a group of individuals in whom the disease is developing but symptoms of diabetes are undiagnosed. The onset of diabetes is a gradual process. Initially the individual experiences few if any symptoms. Hence, a proportion of those with type 2 diabetes are presumed to be undiagnosed with some estimates as high as 50%[5]. Preventative measures are aimed at testing for diabetes by using a fasting blood glucose (FBG) test. The FBG test is recommended every three years in those over 45 years of age by the clinical practice guidelines published by the Canadian Medical Association and the Canadian Diabetes Association in 1998[6]. These guidelines, which are currently under review, address more frequent testing for those with specific risk factors.

For those who are diagnosed, management of the disease is very important, as diabetes cannot be cured. Effective management addresses self-care and optimal metabolic control to avoid the development of complications, which can be debilitating and life threatening.

The interventions—comprehensive. Alberta's strategy targets all age groups by focusing on primary prevention and addressing secondary and tertiary prevention:

- **Primary prevention** targets the well population, those who have not been diagnosed with diabetes. The intent of primary prevention is to keep those people healthy and to prevent them from acquiring the disease. As a result, primary prevention involves stopping or delaying the development of the disease. It includes the promotion of health by personal and community-wide efforts directed toward the improvement of the general well-being of the individual while also involving specific protection against selected diseases.

- **Secondary prevention** targets those who may be at risk of diabetes where efforts are directed at detecting the disease while it is in its early stages and before any major complications occur. For those diagnosed with the disease, measures are undertaken to help them manage their disease effectively to prevent any major complications. At this point, the preventative measures become tertiary.

- **Tertiary prevention** targets those who are already diagnosed with diabetes. The focus of tertiary prevention is to prevent or delay any complications that may result from diabetes. Tertiary prevention is aimed at effective management of diabetes and focuses on glycemic control, regular foot and eye examinations and education on self-care of the disease.

The overall strategic approach—population health. Significant numbers of individuals are at risk of developing diabetes. Consequently, diabetes is regarded as a population health issue that requires a population health approach. Broad strategies need to be considered in reducing the incidence of diabetes, especially type 2 diabetes. Simply isolating the health status of an individual is insufficient to prevent diabetes. It is well known that multiple factors affect an individual's health and overall well being. A population health approach acknowledges the influence of these factors, typically referred to as determinants of health. These factors, which are interrelated are: income and social status; social support networks; education; employment and working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; biology and genetic endowment; health services; gender; culture. A brief description of each health determinant is given in Appendix H.

The determinants of health are prominent when considering the risk factors contributing to diabetes. For example, low income/poverty and low educational levels may adversely affect the capacity of individuals and families to choose and purchase healthy foods and to participate in physical activity programs. Environments need to support individuals, families and communities in making the necessary choices to live healthier lives. A population health approach focuses on all these factors and incorporates multiple strategies and stakeholders to address them.

Chronic disease prevention—a related strategic thrust. Awareness is increasing about the risk factors that are common to a number of chronic diseases, including diabetes, and the need for stakeholders to take an integrated and collaborative approach to their disease prevention and health promotion initiatives. Consequently, efforts are underway by a broad range of stakeholders to address an integrated approach to the development of a chronic disease prevention and health promotion strategy for Alberta. A provincial forum[7], sponsored by the Canadian Diabetes Association and funded by Health Canada and Alberta Health and Wellness, was held in March 2002 to examine integrated approaches to chronic disease prevention and health promotion. The outcomes of this forum will be used to further explore and advance an integrated approach to a chronic disease prevention and health promotion strategy for Alberta.

Overview of this Document

This document contains Alberta's diabetes prevention strategy. The strategy document is organized into two major sections: primary prevention of diabetes and secondary and tertiary prevention of diabetes. Each section begins with the vision, values, principles, long-term outcome and the roles and responsibilities of Alberta Health and Wellness (Part A) and major stakeholders (Part B). The long-term outcome describes the goal, the measure and the target. In each section the key strategies serve as headings to the strategic information that follows.

Each strategy includes:

Issue—A summary statement of the key issue leading to the identification of the strategy.

Objective—A statement of the outcome expected of the strategy.

Key measures and data sources—Areas to be assessed in determining progress in meeting the objective. The data sources indicate the location of the information needed to assess progress or the methodology to be developed in assessing progress. The list is not exhaustive and other data will be used as available.

Target—Specific statement about the desired level of change to be achieved within a given time period.

Background—Qualitative and quantitative information related to the issue and strategy.

Specific strategies: roles and responsibilities—Specific actions identified as appropriate for specific stakeholders given their mandate and areas of accountability.

Overview of Alberta's Diabetes Prevention Strategies and Objectives

Primary prevention of diabetes

Strategy	Objective
1.0 Increase programs and services aimed at strengthening healthy living practices.	Strengthened healthy living practices by improving healthy eating and active living among Albertans.
2.0 Enhance public awareness and education about healthy living.	Increased public awareness and understanding about healthy living practices.
3.0 Address the impact of low income and education on diabetes prevention.	Minimized barriers to healthy living related to low income and education.
4.0 Strengthen professional knowledge, skills and practices in diabetes primary prevention.	Enhanced professional leading practices and interdisciplinary teamwork in the primary prevention of type 2 diabetes.
5.0 Address diabetes primary prevention needs of the Aboriginal population.	Increased intersectoral and integrated diabetes primary prevention initiatives for Aboriginal peoples.

Secondary and tertiary prevention of diabetes

Strategy	Objective
6.0 Strengthen professional knowledge, skills and practices in the education and management of diabetes.	Enhanced professional leading practices and interdisciplinary teamwork in the education and management of diabetes.
7.0 Implement appropriate screening, education, management and support services for those with diabetes.	Strengthened self-care and supportive environments for effective diabetes education and management.
8.0 Address management of diabetes in the Aboriginal population.	Increased intersectoral and integrated diabetes management and education initiatives, programs and services to Aboriginal peoples.

Evaluation, Research & Surveillance

Strategy	Objective
9.0 Facilitate and support diabetes evaluation, research and surveillance initiatives.	Increased research and surveillance on the prevention and management of diabetes.

PRIMARY PREVENTION OF TYPE 2 DIABETES

VISION

Improved health for Albertans: focusing on diabetes prevention.

VALUES

- **Holistic**—Strategies, programs and services encompass the whole person by addressing their physical, emotional, mental, social, spiritual and intellectual aspects of being, taking their individual, family and community circumstances into consideration.
- **Accessible**—Access is provided to a comprehensive range of integrated diabetes prevention services across the health continuum.
- **Excellence**—High standards and leading practices are demonstrated and achieved through research, education and information.
- **Accountable**—Effective outcomes are targeted and accounted for in the conduct of stakeholder responsibilities.
- **Collaborative**—Stakeholders commit to mutually beneficial and well-defined relationships to achieve common goals in diabetes prevention.

PRINCIPLES

- **Integration of healthy lifestyle mindset and practice into all areas of human interaction—places where people live, learn, work, and play.**

  Every facet of an individual's life is a target for promoting and encouraging healthy lifestyles including homes, schools and other educational facilities, workplaces, recreational and sports facilities, shopping and dining venues, and the outdoors whether in urban or rural areas. Programs, services, products, plans, policies, user fees/costs, and incentives need to be considered for their implications or impact on the promotion and practice of healthy lifestyles. Individuals and families then need to take ownership and responsibility for balancing their lifestyle practices to achieve health and well being.

- **Multi-faceted and life-stage targeted strategies using a population health approach.** Given the diversity of the population and the need to address all ages and life stages with respect to lifestyle practices, a multi-faceted approach is needed. Health determinants need to be considered in strategy development to better address the needs of vulnerable populations. Strategies need to address equity and access to services, social marketing, advocacy, education, and legislation/policy. In doing so, the capacity of individuals, families and communities may be strengthened in preventing diabetes and fostering self-care for those already diagnosed.

- **Intersectoral, interdisciplinary and integrated partnerships and shared services.**
  Given the potential severity of diabetes and other chronic diseases, the knowledge of modifiable risk factors and the resulting implications for all sectors, a collaborative and cooperative approach to diabetes and lifestyle awareness, promotion and educational efforts is necessary by all major stakeholders. No one group, government or professional "owns" the issue, nor can any one group, government or professional provide all that is necessary to address the lifestyle factors that put individuals at risk.

- **Interdisciplinary teamwork by qualified professionals.**
  Interdisciplinary and intersectoral team development and management is essential to successful prevention programs. Professionals need to attain and maintain appropriate education; including the application of behavioural change models and the population health approach. Professionals need to be current with the latest research and findings in the prevention of diabetes and other chronic diseases, supported by up to date and easy to use tools and resource materials, including the use of Clinical Practice Guidelines. An integrated approach among health providers is essential. Multiple points of access to diabetes programs are needed to facilitate access to a full range of professionals who may be organized in a variety of configurations.

- **Accessible, culturally appropriate programs and services delivered within a community development framework with multiple points of access.**
  All Albertans, regardless of location, need access to initiatives/programs and services to prevent diabetes. Creative and culturally appropriate strategies are needed for rural and hard to reach communities. Socio-cultural barriers such as language difficulties, illiteracy as well as non-culturally relevant prevention and education resources need to be addressed to meet the needs of minority populations in Alberta. Communities need to be involved in understanding and addressing their health issues. A community development model facilitates community ownership of the health issues and the seeking of appropriate solutions. Multiple points of access are also needed to facilitate accessibility across a broad range of communities.

- **An accountability framework, research and supporting database for program planning and evaluation.**
  Data on the incidence and prevalence of diabetes, leading practices, and the resulting program strategies and outcomes are an essential part of any provincial diabetes prevention program. Research and evaluation are also required to continue to advance the field of knowledge about diabetes, the identification of leading practices, and the effectiveness of specific strategies in addressing specific issues and in working with special populations. The development of collaborative national and provincial frameworks on population health outcomes also needs to be accelerated.

LONG-TERM OUTCOME

Goal: To reduce the incidence of type 2 diabetes.

Measure: Incidence of type 2 diabetes in Albertans.

Target: By 2013, decrease the incidence rate of new cases of type 2 diabetes in Albertans from 4.54 per 1,000 population at risk (Year 2000) to 4.1 per 1,000 population at risk (**10% reduction**).

Cautionary note: Improvements in diabetes surveillance and data collection may generate an increase in the number of diabetes cases that may not be related to an actual increase in diabetes prevalence or incidence rates but is related to improved data collection methods.

Part A

Strategies, Roles and Responsibilities:

Alberta Health and Wellness

THE STRATEGIES

1.0 INCREASE PROGRAMS AND SERVICES AIMED AT STRENGTHENING HEALTHY LIVING PRACTICES

Issue: Unhealthy body weights associated with poor nutrition and physical inactivity are placing people at high risk of diabetes.

Objective: Strengthened healthy living practices by improving healthy eating and active living among Albertans.

Key Measures:

	Measure	***Data Sources***
1.	Proportion of Albertans who report healthy body weights.	Canadian Community Health Survey, National Population Health Survey
2.	Proportion of Albertans who eat nutritious diets in accordance with Canada's Food Guide to Healthy Eating.	Canadian Community Health Survey, Alberta Nutrition Survey
3.	Proportion of Albertans who engage in health-enhancing physical activity in accordance with Canada's Physical Activity Guides.	Canadian Community Health Survey, National Population Health Survey, Alberta Survey on Physical Activity, CFLRI[8] Physical Activity Monitor
4.	Number and type of programs and services focused on healthy eating.	To be determined.
5.	Number and type of programs and services focused on active living.	To be determined.
6.	Proportion of population participating in programs and services focused on healthy eating.	To be determined.
7.	Proportion of population participating in programs and services focused on active living.	Alberta Survey on Physical Activity

Targets:

In five years, increase the proportion of Albertans who engage in healthy eating and active living.

In five years, increase the proportion of Albertans who engage in healthy eating and active living in comparison to other provinces.

In five years, increase the availability of programs and services focused on healthy eating and active living.

BACKGROUND:

- The purpose of primary prevention is to limit the number of people who develop a disease by controlling causes and risk factors for the disease. Physical inactivity, obesity, and dietary factors[9] are all risk factors contributing to the incidence of diabetes.
- Approximately 90-95% of all diabetes is type 2, which is largely preventable, by practicing healthy lifestyles, specifically healthy eating habits and engaging in physical activity.
- The proportion of overweight men, women and children in Alberta is increasing. In 1996-97, 57% of Albertans reported not having a healthy body weight and the 2000 Physical Activity Monitor conducted by the Canadian Fitness and Lifestyle Research Institute[10] indicated that as many as 63% of Albertans are insufficiently active for optimal benefits.
- The prevalence of overweight and obese children is considered at epidemic proportions with the prevalence doubling over the last 15 years.[11] A 1996 study conducted by the Canadian Medical Association showed that 42% of boys and 35% of girls aged 7-13 years were either overweight or obese. Data from the Canadian Community Health Survey published by Statistics Canada show that from 1994/95 to 2000/01, the number of obese Canadians aged 20 to 64 increased by 24% (or more than 500,000 to almost 2.8 million). These individuals represented about 15% of the adult population, or one out of every seven people, up from 13% six years earlier.[12]
- The poor dietary choices of Albertans may be due to a lack of nutritional knowledge, limited food preparation skills, low income and education levels, time pressures, perceived high costs and low appeal of healthy foods, and limited healthy food choices[13].
- Physical inactivity is exacerbated by increased sedentary leisure activities and reduced emphasis on active living programs in the school system combined with high costs and competitiveness of many sporting activities. [14]

ALBERTA HEALTH AND WELLNESS SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

- Collaborate with provincial government departments and regional health authorities in strategies directed at healthy living.
- Allocate resources and monitor outcomes for the provision of programs and services directed at healthy living.
- Promote and support programs and services targeted at reducing risk factors associated with diabetes and other chronic diseases.
- Support research and program evaluation on the outcomes associated with healthy eating and active living.

2.0 ENHANCE PUBLIC AWARENESS AND EDUCATION ABOUT HEALTHY LIVING

Issue:	Limited public understanding of lifestyle practices that place people at risk of diabetes, combined with duplication of organizational efforts.	
Objective:	Increased public awareness and understanding about healthy living practices.	
Key Measures:	***Measure***	***Data Sources***
	1. Level of public awareness about the risk factors contributing to diabetes.	To be determined.
	2. Availability of public education about risk factors and healthy living practices.	To be determined.
	3. Public participation levels in educational programs.	To be determined.
Targets:	In five years, increase the proportion of Albertans who are aware of risk factors that contribute to diabetes. In ten years, increase the proportion of Albertans who understand risk factors and healthy living practices.	

BACKGROUND:

- Everyone may be at risk for diabetes and other chronic diseases, which are affected by lifestyle practices. Given the potential severity of diabetes and other chronic diseases, all sectors are affected, especially chronic disease-focused organizations, and other healthy living sector stakeholders.
- Risk factors for diabetes are also common to other chronic diseases such as cancer and heart disease.
- The prevention of diabetes and other chronic diseases is complex and cannot be the sole responsibility of a single organization. All sectors need to work together to address the lifestyle factors that put individuals at risk.
- Duplication of effort and fragmentation of information from multiple sources with common objectives causes organizations to continue to "re-invent the wheel" and often confuses the general public.

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Collaborate in the development of an intersectoral education and communication plan to increase Albertans' awareness of the health benefits of living healthier lifestyles.
- Participate in and support intersectoral and integrated initiatives directed at public awareness and education on diabetes and other chronic disease prevention.
- Address diabetes prevention through social marketing, education and legislation/policy.
- Strengthen the involvement of all sectors in planning, implementing and evaluating collaborative strategies to address health determinants.

- Enhance interdepartmental policy development and funding initiatives, especially among Alberta Community Development, Alberta Learning and Alberta Children's Services, assessing lead roles according to departmental mandates.
- Coordinate and facilitate provision of diabetes educational resources.

3.0 ADDRESS THE IMPACT OF LOW INCOME AND EDUCATION ON DIABETES PREVENTION

Issue:	Lower levels of income and education associated with lower health status increasing the overall costs to the health system.	
Objective:	Minimized barriers to healthy living related to low income and education.	
Key Measures:	***Measure***	***Data Sources***
	1. Number and type of programs instituted to address barriers related to low income and education.	To be determined.
	2. Number and type of public policies instituted to address barriers related to low income and education.	To be determined.
	3. Number and type of organizations collaborating to address barriers related to low income and education.	To be determined.
Targets:	In ten years, barriers to healthy living related to low income and education are minimized through:	
	a. Increased programs and policies directed at low income.	
	b. Increased programs and policies directed at low education.	

BACKGROUND:

- Considerable research indicates that health status improves with income and level of education. High income determines living conditions such as the ability to obtain sufficient food and to access facilities and programs for active living. Health status also improves with level of education. Education is closely tied to socio-economic status, and effective education contributes to health and prosperity by equipping people with knowledge and skills for problem solving. It increases their opportunities for job and income security and improves people's ability to access and understand information to help keep them healthy[15].
- A lack of knowledge and perceived and actual high costs may discourage healthy eating habits and participation in physical activity. In addition, people's priority to access the basic amenities in life may divert their attention from health issues in general[16].
- Inequities in nutritional well being exist, particularly for the socio-economically disadvantaged.
- Traditional risk reduction programs have had limited success with people in lower income and education groups or differing cultural practices. Culturally appropriate programs need to be developed to address the underlying determinants of health.[17]
- A population health approach focuses on inter-related health determinants such as income, employment and education and is essential for addressing diabetes prevention.
- Limited collaboration among sectors in addressing the determinants of health is a deterrent to promoting healthy lifestyles and preventing chronic disease.
- The health sector needs to collaborate with the sectors that have influence over education and income and incorporate multiple strategies and stakeholder participation to address them.

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Collaborate with other provincial government departments and regional health authorities in strategies directed at health determinants and healthy living.
- Promote understanding of the population health approach and the impact of health determinants.
- Promote public policies and effective strategies to develop and enhance financial support programs for low-income families in collaboration with Alberta Human Resources and Employment and Alberta Children's Services.

4.0 STRENGTHEN PROFESSIONAL KNOWLEDGE, SKILLS AND PRACTICES IN DIABETES PRIMARY PREVENTION

Issue: Variable health professional knowledge and practices in the primary prevention of diabetes.

Objective: Enhanced professional leading practices and interdisciplinary teamwork in the primary prevention of type 2 diabetes.

Key Measures:

	Measure	***Data Sources***
1.	Proportion of professionals involved in interdisciplinary promotion and education initiatives/programs directed at diabetes prevention.	To be determined.
2.	Proportion of professionals using leading practices for the primary prevention of diabetes.	To be determined.
3.	Number and type of interdisciplinary diabetes prevention programs.	To be determined.
4.	Number and type of interdisciplinary chronic disease prevention programs that may have an effect on the prevention of diabetes.	To be determined.

Targets: In five years, increase the proportion of professionals involved in interdisciplinary promotion and education initiatives/programs directed at diabetes prevention.

In five years, increase the proportion of professionals using leading practices in the primary prevention of diabetes.

BACKGROUND:

- Underdeveloped health promotion, disease and injury prevention programs, inconsistent standards and insufficient programming targeted at wellness and health promotion challenge the prevention of diabetes and other chronic diseases.
- Interdisciplinary team development and management is essential to successful prevention programs.
- Professionals need to attain and maintain appropriate education, including the application of behavioural change models and population health approaches.
- Current professional knowledge is viewed as being limited about predictive risk factors including insufficient attention to possible symptoms of diabetes. Professionals need to be current with the latest research and findings in the prevention of diabetes, supported by the appropriate tools and resource materials.
- Team approaches and sharing of program leading practices are generally underdeveloped among health professionals.
- Lack of formalized links with universities to address consistent education and training of health professionals.

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Develop and monitor provincial standards for the provision of health promotion programs and services directed at healthy individuals and communities, to facilitate provincial consistency and provider accountability, including the sharing of leading practices.
- Promote primary health care and multiple points of access.
- Collaborate with Health Canada and all organizations addressing cultural sensitivity for high-risk groups.

5.0 ADDRESS DIABETES PRIMARY PREVENTION NEEDS OF THE ABORIGINAL POPULATION

Issue:	Incidence of diabetes and burden of diabetes among Aboriginal peoples is higher than the general population.	
Objective:	Increased intersectoral and integrated diabetes primary prevention initiatives for Aboriginal peoples.	
Key Measures:	***Measure***	***Data Sources***
	1. Number and type of programs that support primary prevention of diabetes among Aboriginal peoples.	To be determined.
	2. Proportion of Aboriginal peoples participating in programs aimed at primary prevention of diabetes.	To be determined.
Targets:	In ten years, increase intersectoral and integrated diabetes initiatives involving the Aboriginal population.	

Background:

- Diabetes is one of the most common chronic illnesses experienced by the Aboriginal population. The age-standardized prevalence of diabetes in the Aboriginal population is approximately 8.54 %.
- Significant issues include cultural barriers, lack of understanding by professionals of the cultural traditions, health and social conditions facing Aboriginal peoples such as employment and socio-economic conditions, geography and affordable, safe and nutritious foods to meet dietary needs and food preferences, and access to recreational facilities and services.

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Collaborate with First Nations and Métis communities and organizations, Health Canada, other provincial ministries, regional health authorities and other community and provincial organizations in the development, implementation and evaluation of diabetes prevention programs and services for Aboriginal peoples.
- Promote and support holistic, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent diabetes and reduce barriers to healthy living.
- Support Aboriginal media organizations to develop mass media products that focus on healthy eating and active living using appropriate language with translation when required.
- Encourage Aboriginal peoples to pursue careers in the health professions.

SECONDARY AND TERTIARY PREVENTION OF DIABETES

VISION

Albertans with diabetes live healthy lives.

VALUES

- **Holistic**—Strategies, programs and services encompass the whole person by addressing their physical, emotional, mental, social, spiritual and intellectual aspects of being, taking their individual, family and community circumstances into consideration.
- **Accessible**—Access is provided to a comprehensive range of integrated diabetes management programs and initiatives, including specialized services, across the health continuum.
- **Excellence**—High standards and leading practices are demonstrated and achieved through research, education and information.
- **Accountable**—Effective outcomes are targeted and accounted for in the conduct of stakeholder responsibilities.
- **Collaborative**—Stakeholders commit to mutually beneficial and well-defined relationships to achieve common goals in diabetes management.

PRINCIPLES

- **Apply a holistic approach.**
  Diabetes is a disease that affects all dimensions of an individual's life, requiring that both the psychological and physical aspects of the condition be addressed. Individuals may experience denial and depression, which hinders their adaptation to a healthy lifestyle. These situations may also be exacerbated by myths surrounding diabetes, which may be reinforced through the media, creating a stigma for those with diabetes. Diabetes, when effectively managed, allows people to lead healthy lives. As much as possible people with diabetes want to participate in living their lives as others do. Public education is an important part of this process.
- **Interdisciplinary and intersectoral teamwork by qualified practitioners.**
  Interdisciplinary teamwork and collaboration across the health continuum are essential to best support the individual/family affected by diabetes. Teams need to have access to a range of professionals in a variety of settings. Practitioners need to be well informed about diabetes, including its diagnosis, and consistently apply the current clinical practice guidelines for effectively managing the disease.

- **Accessible and culturally appropriate diabetes management and education initiatives, addressing individual needs.**

  Individuals with diabetes and their families need access to diabetes management and education initiatives/ programs[18] and services as soon as possible after their diagnosis as outlined in the most recent Standards of Diabetes Education in Canada[19]. Effective chronic disease management initiatives and programs link health services with intersectoral partners and community resources. Self-care is supported and encouraged by the management team. Innovation in the scheduling and visiting of clients is required with the delegation of care from physicians to other team members as appropriate. Providers are also given access to the expertise necessary to care for patients with the use of evidence-based practice guidelines or protocols.

  Socio-economic and cultural barriers such as income, language difficulties and illiteracy as well as non-culturally relevant prevention and educational resources and materials may affect adherence to healthy lifestyle recommendations. People from different ethnic backgrounds may find it difficult to adhere to recommendations due to their strong cultural beliefs. For example, some cultures equate health and prosperity with being overweight. Professionals need to be aware of and sensitive to the unique cultural traditions and beliefs of minority groups in Alberta.

- **Affordable and practical self-care practices.**

  Effective self-care of diabetes requires attention to healthy eating, physical activity, testing procedures, and use of medications, which may be costly. Those with low or limited incomes may experience financial hardship, and as a consequence, compromise their ability to adhere to recommended practices. Related to this concern is the necessity for practical advice on health and lifestyle issues, considering individuals' living situation.

LONG-TERM OUTCOME

Goal: To reduce the number and severity of complications resulting from diabetes.

Measure: Number and severity of diabetes-related complications in people diagnosed with diabetes.

Target: By 2013, reduce the incidence rate of complications such as end-stage kidney disease, cardiovascular diseases and lower extremity amputations among people with diabetes (**10% reduction**).

Diabetes Related Complications

Diagnosis	Percent in General Population	Percent in Diabetes Population	10 Year Target (10% reduction)
Ischaemic Heart Disease	3.7%	7.8%	6.5%
Hypertension	10.9%	22.7%	20.0%
Cerebrovascular Disease	1.2%	2.3%	1.5%
Renal Failure	0.3%	1.7%	1.0%
Lower Limb Amputation	0.1%	0.4%	0.1%
Coronary Artery Bypass Graft (CABG)	0.3%	0.9%	0.3%
Dialysis	0.04%	0.4%	0.04%

The percentages presented in the table are age-standardized to the 1996 Canadian population and are for the year 2000. The rates of amputation and CABG examined a 7-year history of the population. This means the figures will differ from an annual cross section.

In summary, people with diabetes are:

- 2.5 times more likely to have Ischaemic Heart Disease
- 6.7 times more likely to have hypertension
- 7.9 times more likely to undergo CABG
- 1.8 times more likely to have cerebrovascular disease
- 17.5 times more likely to have a lower limb amputation
- 10.9 times more likely to have renal failure
- 12.6 times more likely to be receiving dialysis

Cautionary note: Improvements in diabetes surveillance and data collection may generate an increase in the number of complications resulting from diabetes that may not be related to an actual increase in diabetes complications but is related to improved data collection methods.

THE STRATEGIES

6.0 STRENGTHEN PROFESSIONAL KNOWLEDGE, SKILLS AND PRACTICES IN THE EDUCATION AND MANAGEMENT OF DIABETES

Issue: Variable health professional knowledge and practices.

Objective: Enhanced professional leading practices and interdisciplinary teamwork in the education and management of diabetes.

Key Measures:

	Measure	*Data Sources*
1.	Proportion of professionals using the most current recommendations according to the Clinical Practice Guidelines for the Management of Diabetes in Canada.	To be determined.
2.	Proportion of professionals involved in interdisciplinary/intersectoral promotion and education initiatives aimed at diabetes.	To be determined.
3.	Number and type of interdisciplinary/intersectoral promotion and education initiatives aimed at diabetes.	To be determined.
4.	Number and type of interdisciplinary/intersectoral diabetes management programs and initiatives.	To be determined.

Targets: In five years, increase the proportion of professionals using the most current recommendations as outlined in the Clinical Practice Guidelines for the Management of Diabetes in Canada.

In five years, increase the proportion of professionals involved in interdisciplinary promotion and education initiatives and programs aimed at the effective management of diabetes.

BACKGROUND:

- The complications of diabetes are serious and potentially life threatening. Early diagnosis and education for clients and families affected by diabetes improves the quality of life for the patient and is more cost-effective, particularly if hospital admissions can be prevented[20].
- Diabetes is a chronic illness that affects many aspects of an individual's overall health. Access to an extended interdisciplinary team of health care professionals and specialists on an ongoing basis as appropriate is required.
- The incidence of diabetes is increasing at a time when the number of practitioners is decreasing, placing substantial demands on the current supply of health providers.
- Current professional knowledge is viewed as being limited about predictive risk factors, behavioural change models, promotion of self-care and population health approaches.
- Many service delivery models are specialist-directed with physicians serving as gatekeepers for accessing the health system. As a result, in some instances unnecessary wait lists are created.

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Promote the use of clinical practice guidelines and the development and functioning of interdisciplinary teams, encouraging a wide range of professional expertise in the management and education of diabetes.
- Promote and support innovative approaches and funding, including primary health care principles, to educate individuals with diabetes.
- Develop, review and/or revise legislation as necessary to allow for the optimal use of various health care professionals in the provision of diabetes care.
- Determine and promote a minimum standard of training through a multi-level diabetes education approach for health professionals including the certification of diabetes educators.
- Explore physician compensation (e.g., alternative payment plans) and interaction with other disciplines (i.e., interdisciplinary teamwork within office and with community professionals).

7.0 IMPLEMENT APPROPRIATE SCREENING, EDUCATION, MANAGEMENT, AND SUPPORT SERVICES FOR THOSE WITH DIABETES

Issue: Limited access to and availability of programs and initiatives focusing on diabetes education, management and support.

Objective: Strengthened self-care and supportive environments for effective diabetes education and management.

Key Measures:

	Measure	*Data Sources*
1.	Proportion of Albertans who are screened for diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada.	To be determined.
2.	Proportion of Albertans applying the most current recommendations for the management of diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada.	To be determined.
3.	Number and type of diabetes education, management, and support initiatives and programs.	To be determined.
4.	Participation in diabetes education, management and support initiatives and programs.	To be determined.
5.	Level of public awareness and understanding about the facts of diabetes and the needs of those with diabetes.	To be determined.

Targets: In five years, increase the proportion of Albertans with diabetes who follow the recommendations in the Clinical Practice Guidelines for the Management of Diabetes in Canada.

In five years, increase the proportion of Albertans screened in accordance with the guidelines in the Clinical Practice Guidelines for the Management of Diabetes in Canada.

In ten years, increase the number of diabetes education, management and support initiatives and programs.

BACKGROUND:

- Due to the slow progression of diabetes, individuals may have diabetes and not be aware of it. The clinical practice guidelines published by the Canadian Medical Association and the Canadian Diabetes Association in 1998, address screening for diabetes programs. These guidelines, which are currently under review, do not recommend mass or population-wide screening for type 2 diabetes. However, testing for diabetes using a fasting blood glucose (FBG) test is recommended every three years in those over 45 years of age. More frequent or earlier testing (or both) should be considered in those with additional risk factors for diabetes. They further recommend that annual testing should be considered in those with one or more predictive risk factors.
- Effective self-care of diabetes requires attention to healthy eating, physical activity, testing procedures, and use of medications. Meta-analyses have shown improvements in patient conditions as a result of education in weight loss, metabolic outcomes and coping/psycho-social outcomes.[21]

- Programs addressing healthy living for those with diabetes are often segregated, reducing their overall effectiveness and efficient use of resources. Programming often focuses on acute care with minimal attention given to community programming to address the broader population health needs and prevent admission to hospitals and visits to emergency departments. Integrated approaches are required across the health continuum.
- Some regional health authorities indicate that they have waiting lists for type 2 diabetes programming. The length of the wait time ranged from two to 12 months[22]. Data on the number of people on the waiting lists were largely unavailable. However, information from an earlier survey done for the diabetes environmental scan indicated that the number of people ranged from four to 214[23].
- Clients with low or limited incomes may experience financial hardship, and as a consequence, compromise their adherence to recommended practices and self-care regimes. As well, these clients are often uninformed about the recommended clinical practice guidelines.
- The public needs to be more aware of and better informed about diabetes to ensure earlier diagnoses and to prevent complications. Increased public awareness also provides greater understanding of the needs of individuals living with diabetes.

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Work towards developing, reviewing and/or revising public policy regarding access to specialized programs for diabetes education and management.
- Promote and support the adoption of clinical practice guidelines in the management of diabetes.
- Develop, review and/or revise legislation as necessary to allow for the optimal use of various health care professionals in the provision of diabetes care, such as nurse practitioners, dietitians and pharmacists.
- In collaboration with other provincial government departments, address health determinants and their impact on the management and education of individuals/families with diabetes, giving attention to income support programs and financial subsidies.
- Reassess the eligibility, appropriateness and adequacy of the guidelines and resources available for coverage of supplies through the Alberta Monitoring for Health Program.

8.0 ADDRESS MANAGEMENT OF DIABETES IN THE ABORIGINAL POPULATION

Issue: Incidence of diabetes and burden of diabetes among Aboriginal peoples is higher than the general population.

Objective: Increased intersectoral and integrated diabetes management and education initiatives, programs and services to Aboriginal peoples.

Key Measures:

	Measure	***Data Sources***
1.	Number and type of programs that support diabetes management and education among Aboriginal peoples.	To be determined.
2.	Proportion of Aboriginal peoples participating in programs aimed at diabetes management and education.	To be determined.
3.	Number and type of complications due to diabetes within Aboriginal community.	To be determined.
4.	Proportion of Aboriginal peoples who are screened for diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada.	To be determined.

Targets: In five years, increase the number and type of initiatives and programs that support diabetes management and education among Aboriginal peoples.

In five years, increase the proportion of Aboriginal peoples participating in programs aimed at diabetes management and education.

In ten years, reduce the number of complications due to diabetes within the Aboriginal community.

In ten years, increase the proportion of Aboriginal peoples screened in accordance with the guidelines in the Clinical Practice Guidelines for the Management of Diabetes in Canada.

Background:

- Diabetes is one of the most common chronic illnesses experienced by the Aboriginal population. The age-standardized prevalence of diabetes in the Aboriginal population is approximately 8.54 %. The incidence and number of complications due to diabetes continues to increase.
- Large distances between Aboriginal communities and remoteness from larger centres exacerbate the human and economic burden associated with diabetes. Urban centres also face unique challenges in addressing the needs of the Aboriginal population living in their communities.
- Significant issues include cultural considerations, lack of understanding of the cultural traditions, health and social conditions facing Aboriginal peoples such as employment and socio-economic conditions, geography and affordable, safe and nutritious foods to meet dietary needs and food preferences, and access to recreational facilities and services.
- The Aboriginal Diabetes Initiative (ADI) is one of four components of the Canadian Diabetes Strategy announced by the Government of Canada in 1999. The ADI was allocated $58 million over five years to assist in meeting the needs of Aboriginal people dealing with the epidemic of type 2 diabetes in their communities[24].

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Collaborate with First Nations and Métis communities and organizations, Health Canada, other provincial ministries, regional health authorities and other community and provincial organizations in the development, implementation and evaluation of diabetes management and education programs and initiatives for Aboriginal peoples.
- Promote and support holistic, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent complications arising from diabetes.

9.0 FACILITATE AND SUPPORT DIABETES EVALUATION, RESEARCH AND SURVEILLANCE INITIATIVES

Issue:	Limited diabetes program evaluation, research and lack of ongoing, comprehensive administrative database for diabetes.	
Objective:	Increased research and surveillance on the prevention and management of diabetes.	
Key Measures:	***Measure***	***Data Sources***
	1. Implementation of comprehensive diabetes surveillance system by 2007.	To be determined.
	2. Uniform collection and submission of standard diabetes data by relevant stakeholders.	To be determined.
	3. Volume and type of research initiatives being funded.	To be determined.
	4. Volume and type of diabetes program evaluations being conducted.	To be determined.
	5. Participation levels of key stakeholders in research and evaluation initiatives.	To be determined.
Targets:	In five years, increase the uniform collection and submission of standard diabetes data by relevant stakeholders. In ten years, increase the volume and type of diabetes research initiatives and diabetes program evaluations being conducted.	

Background:

- Data on the incidence and prevalence of diabetes, leading practices, and the resulting program strategies and outcomes are an essential part of any provincial diabetes prevention program.
- Research and evaluation are required to continually advance the field of knowledge about diabetes, the identification of leading practices, and the effectiveness of strategies in addressing specific issues and in working with special populations.
- Statistical data on diabetes are limited and not collected using a uniform process. Consequently, it is difficult to establish a comprehensive representation of the impact or effectiveness of diabetes prevention and management programs.
- Reliable and comprehensive data are lacking about the health care, personal and financial costs of diabetes.
- Diabetes is often the underlying cause of heart disease, stroke, kidney disease, blindness and lower limb amputation. As a result, the number of physician visits and hospital admissions attributed to diabetes are underreported in surveillance systems.
- The number of deaths attributed to diabetes is estimated to be several times more than the current figures[25].

SPECIFIC STRATEGIES: ROLES AND RESPONSIBILITIES

Alberta Health and Wellness

- Collaborate with regional health authorities in the development of a diabetes surveillance program for the collection and analysis of data to assist program planning and evaluation and to identify leading practices.

- Develop and implement systems and infrastructure for on-going, complete surveillance of diabetes including risk factors and associated conditions to determine comprehensive costs and statistics as well as to support planning, delivery and evaluation of intervention programs[26].
- Develop an accountability framework for research and a supporting database for provincial and regional planning and evaluation.
- Facilitate availability of surveillance data through the National Diabetes Surveillance System to relevant stakeholders to inform program services, prevention initiatives and policy in a timely manner.
- Disseminate research findings.

Part B

Strategies, Roles and Responsibilities:

Other Stakeholder Groups

The following section outlines the roles and responsibilities of numerous organizations/entities that play a significant part in the prevention of diabetes in Alberta.

Each organization/entity has outlined how they will address each specific strategy and are accountable to their respective organizations in operationalizing the outlined roles and responsibilities.

THE STRATEGIES

1.0 INCREASE PROGRAMS AND SERVICES AIMED AT STRENGTHENING HEALTHY LIVING PRACTICES

Regional Health Authorities

- Develop healthy living strategies and innovative and sustainable programs based on the population health approach and apply across the health continuum.
- Collaborate with health professionals and other community organizations in the provision of programs and services aimed at healthy living.
- Collaborate with the municipal government in the design of urban spaces and safe communities and in the provision of recreational facilities, programs and services, including accessible transportation and recreational supports such as walking trails.
- Advocate for improved recreational opportunities in the community for the general population, including accessibility to community sports and recreational facilities and shifting from competitive sport to provide more family recreation events such as family sports days and health walks.
- Collaborate with stakeholders to implement and disseminate existing programs, services, and resources aimed at healthy living such as SummerActive, Canada's Physical Activity Guides, Ever Active Schools, Ever Active Adults.
- Develop, promote and support programs, which promote healthy eating and physical activity to prevent diabetes.
- Introduce creative individual and community development approaches to better nutrition such as collective kitchens, community gardens, and healthy food preparation classes (for children too), "smart shopping" tours.
- Facilitate initiatives, which increase access to nutritious foods at schools, recreational and public facilities, and community food programs and promote workplace wellness programs.
- Strengthen nutrition knowledge and practice of teachers, service providers, including professionals, operators of seniors' lodges, meals on wheels programs, food banks.

Alberta Learning and Education Sector

- Foster supportive environments that build positive lifestyle habits for youth.
- Encourage school authorities and communities to provide healthy foods in school cafeterias, hot lunch programs, and vending machines, to use healthy food products for fund raising campaigns, and to introduce healthy eating incentive programs.
- Support implementation of the new K-12 physical education program, K-9 Health and Life Skills program, and Senior High Career and Life Management program, to enable individuals to develop the knowledge, skills and attitudes necessary to lead active healthy lifestyles.
- Recommend user-friendly educational resources on nutrition and physical activity.

Health Canada

- Collaborate with other federal government departments and branches in strategies directed at healthy living.
- Continue to develop and institute national awareness and educational programs on healthy lifestyles targeted across the life span, such as Canada's Physical Activity Guides and SummerActive.

- Renew Canada's Physical Activity Policy through stakeholder consultations.
- Enhance and disseminate nutrition information (e.g., including common homemade foods, facts on "fast food") in available resources such as Canada's Food Guide to Healthy Eating, and encourage use of Canada's Food Guide.
- Address incentives to encourage healthy eating and active living such as taxation on unhealthy foods and the elimination of GST on sports and recreation equipment.
- Collaborate with stakeholders for the effective dissemination of active living resources and information such as SummerActive, Canada's Physical Activity Guides.

Canadian Diabetes Association and Dietitians of Canada

- Collaborate with other private and voluntary organizations aimed at the prevention of diabetes and other chronic disease, especially those involved in the healthy eating and active living sector.
- Support and promote diabetes and other chronic disease prevention programs.
- Develop and implement initiatives promoting healthy eating programs and physical activity.
- Advocate for initiatives, which increase access to nutritious foods at schools, recreational and public facilities, and community food programs.
- Facilitate self-care and responsibility by developing tools to enable consumers to access and evaluate health information, including Internet information.
- Collaborate with the media and corporate sector in marketing healthy eating and physical activity, using professional marketing expertise.
- Promote and support public policies, programs and services aimed at healthy eating and active living.
- Promote, support and/or conduct research into healthy eating practices and its impact on diabetes.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists, and Pharmacists' Association of Alberta

- Incorporate nutrition and physical activity counselling as part of a comprehensive approach in health practices.
- Educate health professionals to enable identification, referral or counselling of individuals at high risk for developing diabetes.
- Promote the importance of community involvement in public health issues such as diabetes and other related chronic conditions.

Active Lifestyles Portfolio Organizations

- Collaborate with other private and voluntary organizations aimed at the prevention of diabetes and other chronic disease, especially those involved in the healthy eating and active living sector.
- Support the implementation of recommendations in the Alberta Active Living Strategy.
- Promote and support public policies, programs and services aimed at active living.
- Promote, support and conduct research into active living practices and its impact on diabetes.
- Enhance the capacity of practitioners to deliver sound active living information.

Alberta Community Development/Alberta Sport, Recreation, Parks and Wildlife Foundation

- Increase support to provincial sport and recreational organizations to coordinate physical activity opportunities for Albertans.
- Increase support to Active Living organizations with various mandates from fitness training and certification to research and education and local program development and delivery, in the area of active living.
- Provide leadership in coordinating the implementation of Alberta's Active Living Strategy.
- Collaborate with the other levels of government, not-for-profit organizations and private sector to encourage physical activity and active living to be integrated into daily living of Albertans where they live, learn, work and play.
- Collaborate with municipal governments, regional and other representative organizations, such as Alberta Parks and Recreation Association in the design of urban parks and open spaces for supportive physical environments in which to enjoy physical activity and healthy living (safe secure spaces, corridors and recreational infrastructure).
- Collaborate with the Alberta Parks and Recreation Association on the design of a framework for an Ever Active Communities Program to establish criteria and guidelines for developing the physical and social supports for citizens in municipalities to make active healthy living choices.
- Continue to collaborate with Health Canada, National Active Living Stakeholders, to coordinate the provincial implementation and dissemination of active living programs, services and resources.
- Support the development of recreation infrastructure including indoor recreation facilities and recreation corridors.

2.0 ENHANCE PUBLIC AWARENESS AND EDUCATION ABOUT HEALTHY LIVING

Regional Health Authorities

- Provide content expertise for a coordinated approach to public awareness and education, including behavioural change theories and current evidence-based information.
- Coordinate services within and among health regions to increase access to services and educational opportunities on diabetes prevention.
- Support provincial social marketing campaigns and programs.
- Facilitate awareness and information about diabetes prevention among stakeholders involved in community wellness.

Alberta Learning and Education Sector

- Educate teachers, parents and students about diabetes, healthy eating and active living practices necessary to ensure health and well being.
- Incorporate information on the importance of healthy living practices in to core curriculum in schools.
- Collaborate with Alberta Health and Wellness and regional health authorities on initiatives to address children at risk of developing diabetes.
- Enhance links with post-secondary institutions to facilitate comprehensive curricula such as health promotion in professional education programs.

Health Canada

- Participate in and support intersectoral and integrated initiatives directed at public awareness and education on diabetes prevention.
- Continue to develop and institute national awareness and educational programs on healthy lifestyles targeted across the life span.

Canadian Diabetes Association

- Participate in and support intersectoral and integrated initiatives directed at public awareness and education on diabetes prevention.
- Consolidate efforts with other sectors and organizations, particularly other chronic disease-focused organizations, and other healthy living sector stakeholders to strengthen the power of healthy living messages and to avoid duplication and fragmentation.
- Collaborate with other sectors to inform the public, health and other professionals, and the media about diabetes prevention.

Alberta Medical Association, College of Physicians and Surgeons of Alberta and Alberta College of Pharmacists, Pharmacists' Association of Alberta and Dietitians of Canada

- Participate in and support intersectoral and integrated initiatives directed at public awareness and education on diabetes prevention.
- Support and leverage campaigns and programs like "Nutrition Month", "Canadian Health Network" and "Healthy Eating is in Store for You".
- Enhance links with universities and other educational institutions to facilitate comprehensive curricula such as health promotion in professional education programs.
- Consolidate efforts with other sectors and organizations, particularly other chronic disease-focused organizations, and other healthy living sector stakeholders to strengthen the effectiveness of healthy living messages and to avoid duplication and fragmentation.
- Encourage dissemination of information on healthy eating and active living through professional practice settings.

Active Lifestyles Portfolio Organizations

- Participate in and support intersectoral and integrated initiatives directed at public awareness and education on diabetes prevention.
- Continue to support Health Canada's initiatives such as Canada's Physical Activity Guides and Canadian Health Network website.
- Increase public awareness and understanding of healthy living practices through regional Be Fit For Life Centres located in colleges and universities around Alberta.
- Consolidate efforts with other sectors and organizations, particularly other chronic disease-focused organizations, and other healthy living sector stakeholders to strengthen the power of healthy living messages and to avoid duplication and fragmentation.
- Collaborate with other sectors to inform the public, health and other professionals, and the media about diabetes prevention.

Alberta Community Development/Alberta Sport, Recreation, Parks and Wildlife Foundation

- Continue to coordinate the provincial delivery of SummerActive, Canada's national annual physical activity campaign as a means of enhancing public awareness about the benefits of and opportunities for physical activity.
- Participate in and provide input, consultation, and other support to intersectoral and integrated initiatives directed at public awareness and education on diabetes and other chronic diseases.
- Take a leadership role in promoting physical activity through active living, recreation, and sport initiatives for all Albertans.
- Continue to provide significant support to Active Living Portfolio agencies, which provide resource information, education, consultation and opportunities for Albertans to be physically active.
- Continue to coordinate the provincial delivery of SummerActive, as a means of enhancing public awareness about the benefits and opportunities for participation in physical activity.
- Coordinate the distribution of the Guides to Physical Activity targeted at Older Adults, Adults, Children and Youth.

3.0 ADDRESS THE IMPACT OF LOW INCOME AND EDUCATION ON DIABETES PREVENTION

Regional Health Authorities

- Advocate for public policy that addresses the health determinants and will have a positive effect on health.
- Collaborate with health professionals and other community organizations in the provision of programs and services aimed at health determinants and the impact on healthy living.
- Provide opportunities for low-income groups to access services such as dietitians, interpreters, and social services.
- Facilitate access to healthy eating and active living programs, services and resources by providing incentives such as vouchers, coupons and free passes.
- Involve high-needs groups in the development, implementation and evaluation of prevention programming to ensure their unique needs are met.
- Provide practical advice and information on health and lifestyle issues, considering individuals' living situations.
- Develop and provide programs and resources targeting those with less disposable income and education.
- Provide education to health professionals on the population health approach and the impact of the health determinants on health.

Alberta Learning and Education Sector

- Encourage communities to adopt healthy eating practices for students such as the provision of nutrition breaks and hot lunch programs.
- Ensure information is available on programs such as the Ever Active Schools Program, which foster healthy eating and active living practices.

Alberta Human Resources and Employment

- Continue the provision of support to supplement the diabetes-related benefits available under the Alberta Monitoring for Health Program for those Albertans receiving benefits under the Supports for Independence (SFI) and Assured Income for the Severely Handicapped (AISH) programs.
- Continue the provision of premium-free health benefits under the Alberta Child Health Benefit (ACHB) for children in low-income families who are not receiving SFI benefits.

Health Canada

- Promote public policies to support healthy living for those with low income and education.
- Support appropriate programs and materials for those with low income and education.
- Promote the understanding of the population health approach and the impact of health determinants.

Canadian Diabetes Association

- Advocate to reduce barriers to healthy living practices for those with low income and education.
- Tailor information and education to meet needs of those with limited education including attention to language barriers and other cultural needs.
- Provide practical advice on health and lifestyle issues, considering individuals' living situations.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists, Pharmacists' Association of Alberta and Dietitians of Canada

- Advocate to reduce barriers to healthy living practices for those with low income and education.
- Educate health professionals on the population health approach and the impact of health determinants on health.
- Tailor information and education to meet needs of those with limited education including attention to language barriers and other cultural needs.
- Provide practical advice on health and lifestyle issues, considering individuals' living situation.
- Strengthen awareness of the impact of health determinants and the implications for professional practices.
- Promote policies and approaches that build capacities in those with low income and education.

Active Lifestyles Portfolio Organizations

- Advocate for policies, which improve access for children to public recreation facilities, especially children of low and middle-income families.
- Promote the Ever Active Schools program as a means of removing barriers to active living opportunities for children and families.
- Educate practitioners about the barriers that prevent many Albertans from experiencing the health benefits of physical activity.

Alberta Community Development/Alberta Sport, Recreation, Parks and Wildlife Foundation

- Promote policies, which increase access for low-income children and families to public recreation facilities.
- Collaborate with other government departments and provincial not-for-profit organizations in support of research/evidence-based information in the area of physical activity and children and youth.

4.0 STRENGTHEN PROFESSIONAL KNOWLEDGE, SKILLS AND PRACTICES IN DIABETES PRIMARY PREVENTION

Regional Health Authorities

- Strengthen and support professional understanding of and commitment to diabetes primary prevention.
- Facilitate an interdisciplinary approach to strengthening professional leading practices by bringing together a wide range of professional expertise such as social marketers, advocates, and nutrition and fitness experts.
- Apply behavioural change theories to improve effectiveness of existing programs for both groups and individuals.
- Address physician collaboration with other disciplines (i.e., interdisciplinary teamwork within physician offices and with community professionals).
- Remain current and disseminate research and leading practices to practitioners in the primary prevention of diabetes.
- Facilitate and provide opportunities for health professionals to continue education regarding leading practices in health promotion, disease prevention and the population health approach.

Alberta Learning and Education Sector

- Work in collaboration with other stakeholders to support and provide access to prevention initiatives with up-to-date and easy-to-use tools and resource materials.
- Support the inclusion of current research and information regarding the prevention of diabetes in undergraduate, graduate and on-going health professional curricula.

Health Canada

- Promote and support current research and information regarding the prevention of diabetes in health professional training programs.
- Develop culturally sensitive teaching resources for educational professionals working with health professionals.
- Disseminate education resources to health professionals.
- Continue to develop and update information and resource materials about the nutrition information on food labels for use in professional and public education.

Canadian Diabetes Association

- Promote and support interdisciplinary prevention programming.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists, Pharmacists' Association of Alberta, and Dietitians of Canada

- Collaborate on the development of culturally appropriate health promotion resources, which incorporate consistent active living and healthy eating messages for use by health professionals.
- Continuously improve professional knowledge through the dissemination of research and development and promotion of leading practices.

- Address physician collaboration with other disciplines (i.e., interdisciplinary teamwork within physician offices and with community professionals).
- Promote and support interdisciplinary team development and primary prevention programs.
- Promote and facilitate appropriate guidelines and curriculum for undergraduate, graduate and in-service primary prevention programs.
- Incorporate cutting edge research and findings regarding the prevention, management, and surveillance of diabetes in health training curricula, including population health approaches, health determinants and advocacy skill building.
- Support physicians, pharmacists and dietitians with up-to-date and easy-to-use tools and resource materials.
- Remain current with the latest research and findings in the prevention of diabetes.

Active Lifestyles Portfolio Organizations

- Disseminate current research and resource materials on active living to health professionals.
- Develop culturally appropriate active living materials and resources for the use of health professionals.
- Reduce the barriers preventing health professionals from promoting physical activity in their practices.

Alberta Community Development/Alberta Sport, Recreation, Parks and Wildlife Foundation

- Increase support to the Alberta Centre for Active Living for the acquisition and dissemination of evidence-based information on physical activity and its impact on health promotion and chronic disease prevention.
- Collaborate with the Alberta Centre for Active Living and Alberta's major universities on the development of a physical activity research agenda for Alberta.
- Promote and disseminate current evidence based information and resource materials on active living.
- Collaborate on the development of appropriate resource information and materials for use by geographic communities and communities of interest.
- Collaborate with Alberta communities in the development and distribution of community resources and tools for the promotion of active living to community agencies and population groups.
- Conduct the Alberta Recreation Survey every four years to determine the trends and recreation preferences of Albertans for use in developing future policies and programs.

5.0 ADDRESS DIABETES PRIMARY PREVENTION NEEDS OF THE ABORIGINAL POPULATION

Aboriginal Communities and Organizations

- Collaborate with Health Canada, Alberta Health and Wellness and other provincial ministries, regional health authorities, other communities and provincial organizations in the development, implementation and evaluation of diabetes prevention programs and services for Aboriginal peoples.
- Encourage and support the development of capacity within Aboriginal communities to problem solve and develop appropriate approaches and support mechanisms in the prevention of diabetes.
- Support Aboriginal leaders and those responsible for diabetes initiatives in their communities through healthy public policy initiatives.
- Facilitate the awareness and education of non-Aboriginal people regarding the culture, language, traditions and needs of Aboriginal communities and their peoples, including the development of appropriate educational resources.
- Consult with Aboriginal organizations, Health Canada and Alberta Health and Wellness on further development of surveillance systems identifying Aboriginal issues in diabetes prevention.
- Support the development and implementation of culturally appropriate programs and opportunities to live healthy lifestyles both on and off reserve for Aboriginal peoples.
- Support integration and collaboration of programs and resources across local health authority and federal/provincial boundaries.
- Promote and support Aboriginal media organizations to develop resources focusing on positive lifestyles incorporating traditional values, customs and language.

Health Canada

- Collaborate with First Nations and Métis communities and organizations, Alberta Health and Wellness, other provincial ministries, regional health authorities and other community and provincial organizations in the development, implementation and evaluation of diabetes prevention programs and services for Aboriginal peoples.
- Promote and support holistic, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent diabetes and reduce barriers to healthy living.
- Support Aboriginal media organizations to develop mass media products that focus on healthy eating and active living using appropriate language with translation when required.

Regional Health Authorities

- Collaborate with First Nations and Métis communities and organizations, Alberta Health and Wellness, Health Canada, and other community and provincial organizations in the development, implementation and evaluation of diabetes prevention programs and services for Aboriginal peoples.
- Promote and support holistic, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent diabetes and reduce barriers to healthy living.
- Support smooth transition of diabetes prevention initiatives among off reserve and on reserve practitioners and Aboriginal peoples.

- Support Aboriginal media organizations to develop mass media initiatives that focus on healthy eating and active living messages using culturally appropriate language with translation when required.

Alberta Learning and Education Sector

- Collaborate with First Nations and Métis communities and organizations, Alberta Health and Wellness, Health Canada, and other organizations in the development and implementation of education programs and services directed at the prevention of diabetes for Aboriginal peoples.

Canadian Diabetes Association

- Collaborate with First Nations and Métis communities and organizations, Health Canada, Alberta Health and Wellness and other provincial ministries, regional health authorities and organizations in the development, implementation and evaluation of diabetes prevention programs and services for Aboriginal peoples.
- Advocate for equitable access to quality, low cost foods to address food security issues.
- Collaborate with Aboriginal media organizations to provide culturally appropriate materials that focus on healthy eating and active living.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists, Pharmacists' Association of Alberta and Dietitians of Canada

- Collaborate with First Nations and Métis communities and organizations, Health Canada, Alberta Health and Wellness and other provincial ministries, regional health authorities and organizations in the development, implementation and evaluation of diabetes prevention programs and services for Aboriginal peoples.
- Advocate for equitable access to quality, low cost foods to address food security issues.
- Promote and support professional training and interdisciplinary approaches in the provision of comprehensive, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent diabetes.

Active Lifestyles Portfolio Organizations

- Collaborate with First Nations and Métis communities and organizations, Health Canada, Alberta Health and Wellness and other provincial ministries, regional health authorities and organizations in the development, implementation, and evaluation of active living programs for Aboriginal peoples.
- Collaborate on research initiatives aimed at active living for Aboriginal peoples.
- Advocate for equitable access to quality and low cost active living programs including traditional Aboriginal activities.

Alberta Community Development/Alberta Sport, Recreation, Parks and Wildlife Foundation

- Continue to fund and coordinate Alberta's Future Leaders programs to facilitate recreation and healthy living services, through a community development approach, to Aboriginal youth in high-risk communities.

6.0 STRENGTHEN PROFESSIONAL KNOWLEDGE, SKILLS AND PRACTICES IN THE EDUCATION AND MANAGEMENT OF DIABETES

Regional Health Authorities

- Redesign and establish integrated team approaches that include a broad range of professionals to facilitate access to education and management programs and initiatives in a variety of settings across the health continuum.
- Provide the most current and evidenced based care possible and provide a smooth transition among professionals for ongoing care, including access to technology.
- Promote a minimum standard of care through a multi-level diabetes education approach for health professionals including the certification of diabetes educators.
- Support new approaches to diabetes management that are client-driven by an informed client population.
- Attain and maintain appropriate education for professionals including behavioural change models, population health approach, diabetes predictive risk factors, diabetes symptoms and the recommended clinical practice guidelines for screening and managing diabetes.
- Promote and support ongoing education of service providers within and external to the health sector in diabetes management such as community health representatives in Aboriginal communities.
- Promote the use of the most current standards of diabetes education and the clinical practice guidelines.
- Support integration and collaboration of programs and resources across local health authority and federal/provincial boundaries, particularly in those regions with Aboriginal communities.

Alberta Learning and Education Sector

- Encourage inclusion of current research and information regarding the management of diabetes in undergraduate, graduate and on-going health professional curricula.
- Support and facilitate the development of education programs for advanced health providers in diabetes management and education.
- Disseminate current research findings and other information resulting from national initiatives and professional forums.

Health Canada

- Promote and support current research and information regarding the management of diabetes in health professional education.

Canadian Diabetes Association

- Focus on strategies that strengthen the knowledge and clinical practices of all health professionals by encouraging more team approaches and access to specialized diabetes information and care and education programs and initiatives.
- Work with health professional groups to review and update the clinical practice guidelines consistent with evidence-based information.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists, Pharmacists' Association of Alberta and Dietitians of Canada

- Support practitioners to be well informed about diabetes, including its diagnosis, and consistently apply the current clinical practice guidelines for effectively managing the disease to avoid or prevent serious complications across the health continuum.
- Participate in the review and dissemination of relevant clinical practice guidelines consistent with new evidence-based information.
- Promote and support diabetes care by introducing clinical practice guidelines into daily management using appropriate and timely reminders for assessment and management activities[27]
- Promote and support effective undergraduate, graduate, continuing education and in-service training programs directed at diabetes management and education.
- Facilitate the awareness and knowledge of practitioners regarding the unique culture, language, traditions and needs of Alberta's minority groups.

Active Lifestyles Portfolio Organizations

- Collaborate with provincial health practitioner organizations in ensuring that their members have active living information.
- Facilitate knowledge about diabetes management among active living practitioners who are working with individuals and families who have diabetes.

Alberta Community Development/Alberta Sport, Recreation, Parks and Wildlife Foundation

- Promote and disseminate current evidence-based information and resource materials to support active living in diabetes education and management.

7.0 IMPLEMENT APPROPRIATE SCREENING, EDUCATION, MANAGEMENT, AND SUPPORT SERVICES FOR THOSE WITH DIABETES

Regional Health Authorities

- Establish team approaches and multiple points of access to integrated and innovative management initiatives and programs in all settings across the health continuum.
- Develop an integrated population health approach in addressing diabetes management.
- Strengthen access to prompt and appropriate follow-up for individuals and families upon diagnosis of diabetes, according to the Standards of Diabetes Education in Canada.
- Provide the most current and evidenced based care possible and provide a smooth transition among professionals for ongoing care, including access to technology.
- Expand diabetes management resources and programs throughout the province, giving particular attention to rural and remote communities.
- Strengthen availability of and access to specialized diabetes information and management among rural physicians, exploring innovative models such as specialized diabetes interdisciplinary travelling teams or the designation of specific physicians within a community or office practice.
- Provide programs and services in partnership with other organizations.
- Facilitate individual and family adaptation to diabetes by providing pertinent and culturally appropriate education/resource materials, counselling and realistic recommendations given their unique needs and living situations.
- Facilitate a holistic approach to the management of diabetes, addressing the psychosocial as well as the physical aspects of the disease.
- Facilitate and support the development and ongoing maintenance of individual/family support groups and other support mechanisms.
- Encourage and support development, dissemination and evaluation of self-care tools.

Alberta Learning and Education Sector

- Encourage educational institutions to collaborate with the regional health authorities in the management of students with diabetes.
- Encourage educational institutions to educate staff and students about diabetes, including glucose monitoring, insulin, dietary and activity management to better understand and assist students with diabetes.
- Support and facilitate the development of education programs for advanced health providers in diabetes management and education.
- Provide information on healthy eating and active living practices to support children with type 1 diabetes and to reduce the risk of children developing type 2 diabetes.

Alberta Human Resources and Employment

- Continue the provision of support to supplement the diabetes-related benefits available under the Alberta Monitoring for Health Program for those Albertans receiving benefits under the Supports for Independence (SFI) and Assured Income for the Severely Handicapped (AISH) programs.
- Continue the provision of premium-free health benefits under the Alberta Child Health Benefit (ACHB) for children in low-income families who are not receiving SFI benefits.

Health Canada

- Promote and support the adoption of clinical practice guidelines in the screening, management, care and education of diabetes.

Canadian Diabetes Association

- Promote and develop public education programs and initiatives to dispel commonly held misconceptions regarding diabetes and communicate that, when effectively managed, people with diabetes can maintain a high quality of life.
- Promote awareness of the content in the clinical practice guidelines for people with diabetes.
- Work collaboratively with the media and other organizations in dispelling myths about and reducing the stigma attached to diabetes.
- Facilitate access to support systems by referring individuals to health professionals and other support systems using appropriate resource networks.
- Promote and advocate for the support required for individuals as they make lifestyle changes required as the disease changes, addressing the chronic and progressive nature of diabetes.
- Support communities in the development and provision of innovative and appropriate diabetes management and education initiatives, programs and services.
- Advocate for the resolution of challenges and issues related to diabetes management and education programs.

Dietitians of Canada

- Promote and support the adoption of clinical practice guidelines in the management, care and education of diabetes.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists and Pharmacists' Association of Alberta

- Institute and promote a comprehensive approach to the management of diabetes, acknowledging its chronic and progressive nature, and addressing its psychological and physical aspects.
- Facilitate individual and family adaptation to diabetes by providing pertinent and culturally appropriate education/resource materials, counselling and realistic recommendations given their unique needs and living situations.

Active Lifestyles Portfolio Organizations

- Provide active living information to Albertans with diabetes.

Alberta Community Development/Alberta Sport, Recreation, Parks and Wildlife Foundation

- Participate in and provide input, advice, consultation, and other support to intersectoral and integrated initiatives directed at physical activity in diabetes education and management.

- Develop strategies, and participate in initiatives, programs, burden of illness studies, and research with a focus on the needs of Aboriginal and other high-risk groups in Alberta.
- Advocate "integrated" care through the use of interdisciplinary diabetes care teams.

8.0 ADDRESS MANAGEMENT OF DIABETES IN THE ABORIGINAL POPULATION

Aboriginal Communities and Organizations

- Collaborate with Health Canada, Alberta Health and Wellness and other provincial ministries, regional health authorities and other community and provincial organizations in the development, implementation and evaluation of diabetes management and education programs and initiatives for Aboriginal peoples.
- Promote and facilitate education about Aboriginal traditions, culture and beliefs to health professionals.
- Encourage and support the development of capacity within Aboriginal communities to address and develop appropriate approaches and support mechanisms in diabetes management and education, including close collaboration with local health services.
- Facilitate the awareness and education of non-Aboriginal people regarding the culture, language, traditions and needs of Aboriginal communities and their peoples, including the development of appropriate educational resources.
- Consult with Health Canada on the development of surveillance systems identifying Aboriginal issues in diabetes control.
- Support collaboration and integration of programs and resources across local health authority and federal/provincial boundaries.

Health Canada

- Collaborate with First Nations and Métis Aboriginal communities and organizations, Alberta Health and Wellness, other provincial ministries, regional health authorities and other community and provincial organizations in the development, implementation and evaluation of diabetes management and education programs and initiatives for Aboriginal peoples.
- Promote and support holistic, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent complications arising from diabetes.
- Develop, promote and disseminate educational resources for Aboriginal peoples and their communities.
- Encourage Aboriginal peoples to pursue careers in the health professions.

Regional Health Authorities

- Collaborate with First Nations and Métis communities and organizations, Alberta Health and Wellness, Health Canada, and other community and provincial organizations in the development, implementation and evaluation of diabetes management and education programs and initiatives for Aboriginal peoples.
- Promote and support holistic, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent complications arising from diabetes.
- Provide the most current and evidenced based care possible and provide a smooth transition among professionals for ongoing care, including access to technology.
- Support collaboration and integration of programs and resources across local health authority and federal/provincial boundaries.

Alberta Learning and Education Sector

- Collaborate with First Nations and Métis communities and organizations, Alberta Health and Wellness, Health Canada, and other organizations in the development and implementation of programs directed at the care and treatment of diabetes for Aboriginal peoples.

Canadian Diabetes Association

- Collaborate with First Nations and Métis communities and organizations, Health Canada, Alberta Health and Wellness and other provincial ministries, regional health authorities and organizations in the development, implementation and evaluation of diabetes management and education programs and initiatives for Aboriginal peoples.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists, Pharmacists' Association of Alberta and Dietitians of Canada

- Collaborate with First Nations and Métis communities and organizations, Health Canada, Alberta Health and Wellness and other provincial ministries, regional health authorities and organizations in the development, implementation and evaluation of diabetes management and education programs and initiatives for Aboriginal peoples.
- Promote and support professional training and interdisciplinary/intersectoral approaches in the provision of comprehensive, community-based prevention strategies, incorporating traditional and cultural approaches, to prevent complications arising from diabetes.
- Promote professional adherence to clinical practice guidelines for the management of diabetes with particular attention to the guidelines for screening Aboriginal peoples.

9.0 FACILITATE AND SUPPORT DIABETES EVALUATION, RESEARCH AND SURVEILLANCE INITIATIVES

Regional Health Authorities

- Collaborate with Alberta Health and Wellness in the development of a diabetes surveillance program for the collection and analysis of data to assist program planning and evaluation and to identify leading practices.
- Use research to develop indicators and benchmarks to evaluate primary, secondary and tertiary prevention programming and to adjust resource allocation in diabetes through evidence based decision-making.
- Support research regarding the costs, benefits and outcomes of diabetes prevention and education.
- Support the dissemination of surveillance reports to health professionals, researchers, regional health authorities, and appropriate associations and organizations.
- Improve data collection and reporting systems in accordance with the provincial surveillance system and data collection standards.
- Disseminate research findings.

Alberta Learning and Education Sector

- Disseminate research findings.

Health Canada and Federal Government Departments

- Maintain and enhance the National Diabetes Surveillance System.
- Support initiatives to promote research and evaluation of diabetes primary prevention programs.
- Facilitate availability of surveillance data through the National Diabetes Surveillance System to relevant stakeholders to inform program services, prevention initiatives and policy in a timely manner.
- Disseminate research findings.

Canadian Diabetes Association

- Promote and support the collection of qualitative and quantitative data regarding diabetes incidence and prevalence rates, prevention program strategies and outcomes, and leading practices.
- Communicate the urgency and importance of increasing knowledge in the area of chronic disease prevention.
- Continue to fund diabetes research.
- Disseminate research findings.

Alberta Medical Association, College of Physicians and Surgeons of Alberta, Alberta College of Pharmacists, Pharmacists' Association of Alberta and Dietitians of Canada

- Advocate for a provincial diabetes surveillance program for the collection and analysis of data to assist program planning and evaluation and to identify leading practices.
- Support and participate in research regarding the costs, benefits and outcomes of diabetes, including research on new technologies and clinical practices.
- Support the dissemination of surveillance reports to health professionals, researchers, regional health authorities, and appropriate associations and organizations.

- Inform and facilitate adherence to the coding guidelines for tracking the incidence and prevalence of diabetes.
- Disseminate research findings.

CIHR and other Research Funding Agencies[28]

- Support research initiatives, including community-based research, integrating healthy eating and active living studies, which support the primary prevention of diabetes.
- Support research initiatives directed at the secondary and tertiary prevention of diabetes.
- Continue to fund diabetes research.
- Disseminate research findings.

SUMMARY AND NEXT STEPS

Alberta Health and Wellness, in collaboration with its stakeholders, has completed the first step in diabetes prevention by developing this strategy for diabetes prevention in Alberta. The next step involves the implementation of the generic and specific roles and responsibilities described for each stakeholder in diabetes prevention. Ongoing collaboration and networking opportunities such as regional health authority consultation meetings are encouraged for all stakeholders to share their progress, their learning about leading practices, and successful approaches in addressing diabetes prevention challenges. These sessions and other collaborative approaches also provide opportunities to minimize the duplication in the development of programs, educational and clinical resources among stakeholders particularly in regional health authorities and the education sector. As well this strategy serves as a model for stakeholder collaboration in using integrated approaches for the prevention of other chronic diseases.

Recommendation

Participants in the consultation processes involved in the development of this strategy also identified the need for a provincial diabetes prevention advisory group to facilitate and monitor the implementation of the Alberta Diabetes Prevention Strategy. This strategy concludes with a recommendation that Alberta Health and Wellness lead in the facilitation and ongoing monitoring of the Alberta Diabetes Prevention Strategy.

Endnotes

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APPENDICES

Appendix A

Alberta Diabetes Prevention Strategy Working Group Membership

Appendix A—Alberta Diabetes Prevention Strategy Working Group Membership

Name	Position/Organization	Telephone	Fax	E-Mail
Jodi Abbott	Executive Director Prairies Area Canadian Diabetes Association	780.423.5722 Ext. 224	780.423.3322	jodi.abbott@diabetes.ca
Statia Buckmaster	Program Consultant Population and Public Health Branch Alberta/NWT Region Health Canada	780.495.8304	780.495.7842	statia_buckmaster@hc-sc.gc.ca
Phillip Burke	Project Leader Aboriginal Health Policy Federal/Provincial Relations Alberta Health and Wellness	780.415.2834	780.427.2511	phil.burke@gov.ab.ca
Lauran Chittim	R.N. Consultant Aids to Daily Living Program Alberta Health and Wellness	780.422.4846	780.422.0968	lauran.chittim@gov.ab.ca
Brenda Cantin	Program Manager Population and Public Health Branch Alberta/NWT Region Health Canada	780.495.5113	780.495.5537	brenda_cantin@hc-sc.gc.ca
Elizabeth Gyorfi-Dyke	Policy Consultant Strategic Development Branch Strategic Planning Alberta Health and Wellness	780.415.1375	780.427.2511	elizabeth.gyorfi-dyke@gov.ab.ca
Helen Legg	Project Team Leader Population Health Strategies Branch Population Health Division Alberta Health and Wellness	780.427.8010	780.422.5474	helen.legg@gov.ab.ca
Richard Lewanczyk	Director Division of Endocrinology and Metabolism University of Alberta	780.407.6277	780.407.6702	rlewancz@gpu.srv.ualberta.ca

Appendix A—Alberta Diabetes Prevention Strategy Working Group Membership

Name	Position/Organization	Telephone	Fax	E-Mail
Arvelle Balon-Lyon	Coordinator Diabetes & Lipids Education Community Health Chinook Health Region	403.382.6673	403.328.5934	abalon@mail.chr.ab.ca
Dave Lindsay	Volunteer President Grande Prairie & District Branch Canadian Diabetes Association	780.624.7013 Bison Contracting	780.624.2677 Bison Contracting	dlbison@telusplant.net
Judith Moodie	Director Alberta Centre for Active Living	780.427.8008	780.455.2092	judith.moodie@ualberta.ca
Neil MacDonald (Chair)	Team Leader Population Health Strategies Branch Population Health Division Alberta Health and Wellness	780.415.2759	780.422.5474	neil.macdonald@gov.ab.ca
Sandra Shade	Regional Diabetes Coordinator First Nations and Inuit Health Branch Health Canada	780.495.8710	780.495.2687	sandra_shade@hc-sc.gc.ca
Larry Stoyko	Medical Diabetes Consultant Lakeland Regional Health Authority	780.632.3331	780.632.2820	lstoyko@lrha.ab.ca
Larry Svenson	Project Coordinator Health Surveillance Branch Population Health Division Alberta Health and Wellness	780.422.4767	780.427.1470	larry.svenson@gov.ab.ca
Jayne Thirsk	Regional Executive Director Alberta & Territories Dietitians of Canada	403.217.5211	403.217.5212	jthirsk@dietitians.ca

Appendix B

Glossary of Terms

Appendix B—Glossary of Terms

The following definitions have been taken from the World Health Organization Health Promotion Glossary[29] unless otherwise indicated.

Term	Definition
Aboriginal title[30]	A legal term that recognizes Aboriginal interest in the land. It is based on their longstanding use and occupancy of the land as descendants of the original inhabitants of Canada.
Age-standardized rates[31]	The age-standardized rate represents what the crude rate would be if the population under study had the age distribution of the standard population. It is the weighted average of age-specific rates applied to a standard distribution of age.
Body mass index (BMI)[32]	A measure of human body size and proportion, defined as the weight in kilograms divided by the square of height in meters.
Determinants of health	The range of personal, social, economic and environmental factors, which determine health status of individuals or populations. The factors which influence health are multiple and interactive. Health promotion is fundamentally concerned with action and advocacy to address the full range of potentially modifiable determinants of health, not only those which are related to the actions of individuals, such as health behaviours and lifestyles, but also factors such as income and social status, education, employment and working conditions, access to appropriate health services, and the physical environment.
Food security	Having access to sufficient, safe and nutritious foods to meet dietary needs and food preferences for an active and healthy lifestyle.
Health goal	Summarize the health outcomes, which, in the light of existing knowledge and resources, a country or community might hope to achieve in a defined health period.
Health indicator	Characteristic of an individual, population, or environment, which is, subject to measurement (directly or indirectly) and can be used to describe one or more aspects of the health of an individual or population (quality, quantity and time).
Health outcomes	Change in the health status of an individual, group or population, which is attributable to a planned intervention or series of interventions, regardless of whether such an intervention was intended to change health status.
Health promotion	Process of enabling people to increase control over, and to improve their health. Health promotion represents a comprehensive social and political process, it not only embraces actions directed at strengthening the skills and capabilities of individuals but also action directed towards changing social, environmental and economic conditions so as to alleviate their impact on public and individual health.
Health target	For a given population, the amount of change (using a health indicator), which could be reasonably expected within a defined time period. Targets are generally based on specific and measurable changes in health outcomes, or intermediate health outcomes.
Healthy public policy	Characterized by an explicit concern for health and equity in all areas of policy, and by accountability for health impact. The main aim of healthy public policy is to create a supportive environment to enable people to lead healthy lives.
Incidence rate[33]	Measures the probability that healthy people will develop a disease during a specified period of time, i.e., number of new cases of a disease in a population over a period of time.

Appendix B—Glossary of Terms

Term	Definition
Intersectoral collaboration	Recognized relationship between part or parts of different sectors of society, which has been formed to take action on an issue to achieve health outcomes or intermediate health outcomes in a way, which is more effective, efficient or sustainable than might be achieved by the health sector acting alone. Intersectoral action for health is seen as central to the achievement of greater equity in health, especially where progress depends upon decisions and actions in other sectors such as agriculture, education, and finance. Increasingly intersectoral collaboration is understood as cooperation between different sectors of society such as the public sector, civil society and the private sector.
Leading practices[34]	Leading practices is used as a preferred term to best practices. Best practices refer to processes or procedures that consistently produce superior results. Scientific evidence may not be available to support that a particular practice is a best practice but based on experiential evidence, a particular practice may be viewed as leading in generating desired results or outcomes.
Obesity[35]	A relative term for excessive accumulation of fat in the body, a generally accepted measure of obesity is having a body mass index (BMI) greater than or equal to 25-27.
Prevalence[36]	Measures the number of people who have the disease at a given time.
Quality of life	Individual's perceptions of their position in life in the context of the culture and value system where they live, and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept, incorporating in a complex way a person's physical health, psychological state, level of independence, social relationships, personal beliefs and relationship to salient features of the environment.
Risk behaviour	Specific forms of behaviour, which are proven to be associated with increased susceptibility to a specific disease or ill health.
Risk factor[37]	A risk factor is an attribute, which is positively associated with the development of a disease but is not sufficient to cause the disease.
Self-care[38]	Self-care generally refers to the capability of individuals to manage their health and care needs on their own by having access to accurate information about their health status and condition and working in partnership with pertinent health professionals.

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Appendix C

Chronology of Diabetes Initiatives

Appendix C—Chronology of Diabetes Initiatives

Event	Organization	Date
Canadian Diabetes Strategy Five year, $115M to prevent and control diabetes in Canada, consisting of four components: Prevention and Promotion, Aboriginal Diabetes Initiative, National Diabetes Surveillance System, National Coordination.	Health Canada	Launched November 1999
Alberta-wide Forum on Diabetes In November 1999, an Alberta-wide Forum on Diabetes was held which provided the opportunity for presentations and discussions between various health professionals, health administrators, government representatives, and consumers.	Alberta Clinical Practice Guidelines Program, Alberta Medical Association; Canadian Diabetes Association, Alberta & NWT; Alberta Research Council and Alberta Health and Wellness	November 4-6, 1999
Diabetes Environmental Scan for Alberta Reviewed existing programs and services, barriers and opportunities relevant to diabetes (type 1, type 2 and gestational) and determined the key stakeholders and their respective roles in addressing diabetes in Alberta.	Prepared by KPMG Consulting for the Dietitians of Canada and funded through the Prevention and Promotion Contribution Program of Health Canada	Completed February 2001
Alberta Diabetes Consultation Sessions Obtained information and perspectives from a variety of stakeholders involved in or affected by diabetes that could provide a foundation for the development of a provincial diabetes prevention strategy.	Prepared by KPMG Consulting for the Dietitians of Canada and funded through the Prevention and Promotion Contribution Program of Health Canada	Completed July 2001
National Diabetes Strategy A National Diabetes Strategy is currently being developed by a Federal/Provincial/Territorial Committee that will focus on five theme areas: prevention, care, research, surveillance and education.	Coordinating Committee - National Diabetes Strategy (CC-NDS)	Inaugural meeting held November 20-21, 2001
Canadian Diabetes Association Report Card 2001 Comparative analysis of diabetes policies, programs and services across Canada.	Canadian Diabetes Association	Released November 2001

Appendix C—Chronology of Diabetes Initiatives

Event	Organization	Date
Preventing Chronic Disease: Working Together in an Integrated Approach Subject of a forum to create opportunities for developing and implementing an integrated chronic disease prevention strategy for Alberta.	Steering Committee: Alberta Cancer Board, Alberta Health and Wellness, Alberta Heart Health Project, Alberta Heart and Stroke Foundation, Alberta Sport, Recreation, Parks & Wildlife Foundation, Alberta Tobacco Reduction Alliance, Canadian Cancer Society, Canadian Diabetes Association, Dietitians of Canada, Health Canada, Obesity Canada	Held March 20 & 21, 2002
Alberta Diabetes Prevention Strategy Development of a diabetes prevention strategy for Alberta.	Alberta Health and Wellness	Started January 2002

Appendix D

Listing of Diabetes Projects Funded in Alberta Under the Canadian Diabetes Strategy, Prevention and Promotion Contribution Program

Appendix D—Listing of Diabetes Projects Funded in Alberta Under the Canadian Diabetes Strategy, Prevention and Promotion Contribution Program

The following list describes projects funded as of March 2002.

Sponsor	Project Title and Description
Dietitians of Canada, Alberta and Territories P.O. Box 74090 Strathcona Postal Outlet Calgary, Alberta T3H 3B6 **Contact: Jayne Thirsk** **Regional Executive Director** **AB/Territories Region** (403) 217-5211 phone (403) 217-5212 fax jthirsk@dietitians.ca	**The Alberta Diabetes Consultation Process** The goal of this project is to consult with key stakeholders to obtain a perspective of the issues, needs and challenges that need to be addressed for the prevention and management of diabetes in Alberta. Six to eight workshops will be held across the province involving people with diabetes and their families, health professionals, diabetes co-morbidities groups, regional health authorities, the private sector and non-government organizations. Priority areas and recommendations obtained from the consultations will be consolidated into a report that will provide a framework for the potential development of a provincial strategy. **Food Security, Diabetes and Healthy Albertans: An Environmental Scan of Food Security Initiatives and Low Cost Physical Activity Options** The goal of this project is to identify and promote effective community approaches to address the factors that influence food security and access to active living opportunities as related to the prevention of diabetes and other chronic diseases. Educational resources will be assessed in collaboration with the target population and selected resources will be broadly disseminated to stakeholders throughout Alberta. The project aims to build the foundation to create a potential network of organizations through which further information dissemination, advocacy of healthy public policy and identification of other issues, could occur.
Pembina Hills Regional School Division No. 7 5310 - 49 Street Barrhead, Alberta T7N 1P3 **Contact: Cam Oulton** **Principal @ Large** (780) 674-8505 phone (780) 674-3262 fax coulton@phrd.ab.ca	**Healthy Children and Families in Pembina Hills** The goal of this project is to enhance the capacity of targeted communities in Pembina Hills Regional Division to support healthy eating and active living behaviours in children and families. Schools, students, parents, Aspen Regional Health Authority, service providers, businesses and other community members will collaborate to develop strategies and implement activities that will promote active living and healthy eating in the community of Barrhead. The project will be expanded into a second community in the third year.

Appendix D—Listing of Diabetes Projects Funded in Alberta Under the Canadian Diabetes Strategy, Prevention and Promotion Contribution Program

Sponsor	Project Title and Description
Edmonton Public Schools Centre for Education One Kingsway Avenue Edmonton, Alberta T5H 4G9 **Contact: Sandra Woitas** **City Centre Education Coordinator** (780) 471-2630 phone (780) 474-7693 fax sandra.woitas@epsb.ca	**Preventing Type 2 Diabetes Among Inner City School-Aged Children** The goal of this project is to increase access to healthy choices with respect to nutrition and active lifestyles for low-income children in three inner city schools in Edmonton. Barriers to active living and healthy eating will be identified by students, parents, teachers and project partners. After-school activities will be developed and implemented and existing school programs focussing on increasing student's skills and knowledge of healthy eating will be enhanced in response to the identified needs. The project will assess and develop policies in the schools and community to support healthy living behaviours.
Alberta Centre for Active Living 11759 Groat Road, 3rd Floor Edmonton, Alberta T5M 3K6 judith.moodie@ualberta.ca **Contact: Jennifer Dechaine** **Older Adult Coordinator** (780) 415-8885 phone (780) 455-2092 fax jennifer.dechaine@ualberta.ca	**Ever Active Adults: Opportunities for Aging Through Education and Policy** The goal of the Ever Active Adults project is to increase opportunities for physical activity among older adults living in publicly funded senior citizens lodges. In this phase of the project, a training curriculum will be delivered to practitioners across Alberta that will enable the practitioner to effectively implement physical activity programs for lodge residents. The curriculum will be assessed as to its effectiveness and a nutrition component will be incorporated. Policies and guidelines for active living programming in Alberta lodges will be developed and incorporated into existing lodge operating standards.
Canadian Diabetes Association, Alberta/Northwest Territories Division 1010, 10117 Jasper Avenue N.W. Edmonton, Alberta T5J 1W8 **Contact: Freda Badry** **Northern Regional Director** freda.badry@diabetes.ca	**Building Capacity for Healthy Living to Prevent Diabetes** The goal of this project is to enhance the capacity of the Edson region to promote and support healthy living behaviours that contribute to the prevention of type 2 diabetes. A needs assessment and community meetings to engage the public in discussion of effective healthy eating and active living strategies will be conducted. An action plan will be developed to support identified strategies and a diabetes awareness forum will be held to promote the action plan. The action plan will be carried out in the second year of the project. **Diabetes Health Forum** The Canadian Diabetes Association will host a Diabetes Health Forum in Calgary targeting Albertans, primarily in the Calgary area, who are at high risk of developing diabetes, persons recently diagnosed with diabetes, family and friends of persons with diabetes, health care providers and the general public. Sessions at the Forum will provide general information on diabetes, lifestyle management such as cooking and exercise classes, foot care, diabetes among First Nations people and diabetes research initiatives.

Appendix D—Listing of Diabetes Projects Funded in Alberta Under the Canadian Diabetes Strategy, Prevention and Promotion Contribution Program

Sponsor	Project Title and Description
Alberta Milk 14904 - 121A Avenue Edmonton, Alberta T5V 1A3 ***Signing Authority:*** ***Cindy Thorvaldson, MSc. RD*** ***Nutrition Manager*** (780) 453-5942 Ext. 316 phone (780) 455-2196 fax cthorvaldson@albertamilk.com	**The Alberta Schools Initiative: Beyond An Apple A Day and the Nutrition File® for Television** This multi-faceted project includes two components: a social marketing campaign and a school health initiative. The social marketing component includes assessing the impact and quality of existing resources and increasing distribution of existing Nutrition File® Diabetes Public Service Announcements. The school health initiative includes assessing the healthy eating and active living practices of the youth through an Internet-based survey and identifying the barriers that face youth in adopting these practices. Results of the school project will be communicated to key policy influencers to promote healthy school environments.
Livingstone Range School Division No. 68 P.O. Box 69 5202 - 5th Street West Claresholm, Alberta T0L 0T0 **Contact: Debbie Deak** **Program Supervisor** (403) 625-3356 phone (403) 625-2424 fax deakd@mail.lrsd.ab.ca	**KIN Kids Prevention Project** The goal of this project is to create a supportive environment in the Fort MacLeod area for low-income children and their families to make healthy choices. Project activities will focus on the development and implementation of school and community-based nutrition and active living strategies. Areas for policy change and development in the schools and community will be identified and addressed.
Alberta Teachers' Association c/o Ever Active Schools Program Barnett House 11010 - 142 Street Edmonton, Alberta T5N 2R1 **Contact: Michael Podlosky** **Executive Assistant** (780) 447-9466 phone mpodlosky@teachers.ab.ca	**Ever Active Schools Demonstration Project** The Ever Active Schools model will be used in two rural school districts to implement active living and healthy eating strategies that contribute to the prevention of type 2 diabetes. An Ever Active coordinator position will be created in one district to facilitate community involvement in project activities, and in the other district the project coordinator with work with school Action Teams to develop culturally appropriate strategies for healthy living within the school community. An Ever Active-Forever Healthy Forum will be held in Year 2 of the project to facilitate sharing of resources and learnings from the demonstration sites.

Appendix D—Listing of Diabetes Projects Funded in Alberta Under the Canadian Diabetes Strategy, Prevention and Promotion Contribution Program

Sponsor	Project Title and Description
Boys and Girls Club Community Services 731 - 13 Avenue North East Calgary, Alberta T2E 1C8 ***Signing Authority:*** ***Cheryl Doherty, Executive Director*** (403) 520-1531 phone (403) 276-9988 fax cdoherty@bgcc.ab.ca Contact: same as above	**Development of a Data and Outcome Measurement Model for Prevention of Childhood Overweight and Obesity** The goal of this project is to develop a data and outcome measurement model, within the community-integrated framework for obesity prevention developed in a previous project, to assess the prevalence of overweight and obesity in children. The model will be pilot tested in selected sites within Calgary and then be considered for broader application in Calgary Health Region and other communities. **Development of a Framework for Prevention of Obesity** The goal of this project is to develop a prevention framework to guide a coordinated approach among key stakeholders within the Calgary region to address obesity in children. Stakeholders from the education and active living sectors, as well as the CDA and community members impacted by diabetes or obesity, will help define the key elements of the prevention framework. Other activities include conducting an environmental scan of monitoring and surveillance systems associated with obesity, that will compliment the framework and designing and implementing a validation process for the framework in the community.
Provincial Fitness Unit c/o Faculty of Physical Education and Recreation University of Alberta Edmonton, Alberta T6G 2H9 **(courier address:** Floor 3, 11759 Groat Road Edmonton, Alberta T5M 3K6) ***Signing Authority:*** ***Katherine MacKeigan, Director*** (780) 492-4435 phone (780) 455-2264 fax katherine.mackeigan@ualberta.ca Contact: same as above	**Creating Physical Activity Opportunities and Choices for Persons With Diabetes** The goal of the project is to build the capacity of the provincial Be Fit for Life Network to work with the community and nutrition and active living sectors to address diabetes prevention. A diabetes prevention framework will be developed through discussions with key stakeholders, the target population and project partners. The framework will be used to develop a diabetes prevention strategy or program that will be pilot tested in two Be Fit Life Network regions.

Appendix D—Listing of Diabetes Projects Funded in Alberta Under the Canadian Diabetes Strategy, Prevention and Promotion Contribution Program

Sponsor	Project Title and Description
Dairy Nutrition Council of Alberta 14904 – 121A Avenue Edmonton, Alberta T5V 1A3	**The Nutrition File® for Television: Public Service Programming to Prevent Diabetes** The goal of the project is to increase awareness of diabetes and provide Albertans with information on how to implement positive lifestyle changes, related to healthy eating and active living, to assist in the prevention of diabetes. Eight television Public Service Announcements will be created to target adults, particularly women, who influence the choice of foods and activities for their families. Corresponding consumer fact sheets will be developed that provide complementary action-oriented information on changing lifestyle habits.

Appendix E

Overview of Alberta's Diabetes Prevention Strategies, Objectives and Key Measures

Appendix E —Overview of Alberta's diabetes prevention strategies, objectives and key measures

Overview of Alberta's diabetes prevention strategies, objectives and key measures

Strategy		Objective	Key Measures
1.0	Increase programs and services aimed at strengthening healthy living practices	Strengthened healthy living practices by improving healthy eating and active living among Albertans.	1. Proportion of Albertans who report healthy body weights. 2. Proportion of Albertans who eat nutritious diets in accordance with Canada's Food Guide to Healthy Eating. 3. Proportion of Albertans who engage in health-enhancing physical activity in accordance with Canada's Physical Activity Guides. 4. Number and type of programs and services focused on healthy eating. 5. Number and type of programs and services focused on active living. 6. Proportion of population participating in programs and services focused on healthy eating. 7. Proportion of population participating in programs and services focused on active living.
2.0	Enhance public awareness and education about healthy living	Increased public awareness and understanding about healthy living practices.	1. Level of public awareness about the risk factors contributing to diabetes. 2. Availability of public education about risk factors and healthy living practices. 3. Public participation levels in educational programs.
3.0	Address the impact of low income and education on diabetes prevention	Minimized barriers to healthy living related to low income and education.	1. Number and type of programs instituted to address barriers related to low income and education. 2. Number and type of public policies instituted to address barriers related to low income and education. 3. Number and type of organizations collaborating to address barriers related to low income and education.

Appendix E —Overview of Alberta's diabetes prevention strategies, objectives and key measures

Overview of Alberta's diabetes prevention strategies, objectives and key measures (Continued)

Strategy		Objective	Key Measures
4.0	Strengthen professional knowledge, skills and practices in diabetes primary prevention	Enhanced professional leading practices and interdisciplinary teamwork in the primary prevention of type 2 diabetes.	1. Proportion of professionals involved in interdisciplinary promotion and education initiatives/programs directed at diabetes prevention. 2. Proportion of professionals using leading practices for the primary prevention of diabetes. 3. Number and type of interdisciplinary diabetes prevention programs. 4. Number and type of interdisciplinary chronic disease prevention programs that may have an effect on the prevention of diabetes.
5.0	Address diabetes primary prevention needs of the Aboriginal population	Increased intersectoral and integrated diabetes primary prevention initiatives for Aboriginal peoples.	1. Number and type of programs that support primary prevention of diabetes among Aboriginal peoples. 2. Proportion of Aboriginal peoples participating in programs aimed at primary prevention of diabetes.
6.0	Strengthen professional knowledge, skills and practices in the education and management of diabetes	Enhanced professional leading practices and interdisciplinary teamwork in the education and management of diabetes.	1. Proportion of professionals using the most current recommendations according to the Clinical Practice Guidelines for the Management of Diabetes in Canada. 2. Proportion of professionals involved in interdisciplinary/intersectoral promotion and education initiatives aimed at diabetes. 3. Number and type of interdisciplinary/intersectoral promotion and education initiatives aimed at diabetes. 4. Number and type of interdisciplinary/intersectoral diabetes management programs and initiatives.

Appendix E —Overview of Alberta's diabetes prevention strategies, objectives and key measures

Overview of Alberta's diabetes prevention strategies, objectives and key measures (Continued)

Strategy		Objective	Key Measures
7.0	Implement appropriate screening, education, management and support services for those with diabetes	Strengthened self-care and supportive environments for effective diabetes education and management.	1. Proportion of Albertans who are screened for diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada. 2. Proportion of Albertans applying the most current recommendations for the management of diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada. 3. Number and type of diabetes education, management, and support initiatives and programs. 4. Participation in diabetes education, management and support initiatives and programs. 5. Level of public awareness and understanding about the facts of diabetes and the needs of those with diabetes.
8.0	Address management of diabetes in the Aboriginal population	Increased intersectoral and integrated diabetes management and education initiatives, programs and services to Aboriginal peoples.	1. Number and type of programs that support diabetes management and education among Aboriginal peoples. 2. Proportion of Aboriginal peoples participating in programs aimed at diabetes management and education. 3. Number and type of complications due to diabetes within the Aboriginal Community. 4. Proportion of Aboriginal peoples who are screened for diabetes according to the Clinical Practice Guidelines for the Management of Diabetes in Canada.
9.0	Facilitate and support diabetes evaluation, research and surveillance initiatives	Increased research and surveillance on the prevention and management of diabetes.	1. Implementation of comprehensive diabetes surveillance system by 2007. 2. Uniform collection and submission of standard diabetes data by relevant stakeholders. 3. Volume and type of research initiatives being funded. 4. Volume and type of diabetes program evaluations being conducted. 5. Participation levels of key stakeholders in research and evaluation initiatives.

Appendix F

Summary of Key Stakeholder Roles and Responsibilities

Appendix F —Summary of Key Stakeholder Roles and Responsibilities

Stakeholder	Primary Prevention	Secondary/Tertiary Prevention
Individuals and families	• Accept responsibility for lifestyle practices by becoming knowledgeable about and applying healthy living practices. • Serve as effective role models and encourage healthy living practices. • Seek new information to continuously learn about healthy living and the management of diabetes for those affected by diabetes. • Facilitate development of and participate in support groups and other helping and educational networks.	• Accept responsibility for effective diabetes self-care by becoming knowledgeable about their diabetes conditions and the requirements for healthy eating, physical activity, testing and medication. • Support necessary changes to enable healthy living and healthy lifestyles for those with diabetes. • Facilitate development of and participate in support groups and other helping and educational networks.
Communities, including the education system and employers	• Supply and/or facilitate the necessary supports and resources to enable healthy living. • Review/re-institute/expand policies, programs and incentives in the school system to encourage healthy living practices. • Develop/expand policies, programs and incentives in the workplace to encourage healthy living practices.	• Supply and/or facilitate the necessary supports and resources to enable healthy lifestyles for those with diabetes. • Support necessary changes to enable healthy living and healthy lifestyles for those with diabetes.

Appendix F —Summary of Key Stakeholder Roles and Responsibilities

Stakeholder	Primary Prevention	Secondary/Tertiary Prevention
Regional health authorities	• Develop regional diabetes prevention model/framework/strategy consistent with the provincial diabetes prevention strategy and incorporate the strategy into the RHA business plan and accountability framework. • Develop and implement an integrated population health approach in addressing diabetes and chronic disease prevention. • Develop healthy living strategies and innovative and sustainable programs based on the population health approach and apply across the health continuum. • Develop, promote and support programs, which promote healthy eating and physical activity to prevent diabetes. • Prioritize and allocate funding for accessible and sustainable health promotion and disease prevention programs in collaboration with other stakeholders, including community members to address the determinants of health. • Provide content expertise for a coordinated approach to public awareness and education, including behavioural change theories and current evidence-based information. • Provide necessary support systems required to implement an effective regional diabetes strategy. • Designate individual employees or groups to assume responsibility for diabetes prevention initiatives. • Collaborate with health professionals and other community organizations in the provision of programs and services aimed at health determinants and the impact on healthy living. • Collaborate with other stakeholders in the provision and evaluation of healthy living programs and resources. • Provide education to health professionals on the population health approach and the impact of the health determinants on health.	• Develop and implement an integrated population health approach in the management of diabetes. • Provide/expand accessible diabetes education and management programs and initiatives. • Focus on the special needs of those with diabetes and develop specific programs and initiatives to meet those needs. • Pursue opportunities to form partnerships with other sectors to provide shared services. • Collaborate with other stakeholders in the provision and evaluation of innovative and evidence-based programs and services directed at effective diabetes education and management. • Facilitate self-care and responsibility by developing tools to enable consumers to access and evaluate health information, including Internet information. • Promote use of the most current clinical practice guidelines.

Appendix F —Summary of Key Stakeholder Roles and Responsibilities

Stakeholder	Primary Prevention	Secondary/Tertiary Prevention
Health professionals	• Recognize the importance of addressing diabetes at all levels of prevention—primary, secondary and tertiary. • Develop educational strategies to continuously maintain current knowledge and skills on healthy living, the population health approach and the application of healthy public policy. • Develop, promote and support programs that promote healthy eating and physical activity to prevent diabetes. • Develop healthy living strategies and innovative and sustainable programs based on the population health approach and apply across the continuum. • Continue to promote multifaceted and intersectoral approaches to diabetes and chronic disease prevention. • Develop processes to coordinate, inform and educate diabetes health professionals on the use of interdisciplinary team approaches. • Develop educational strategies and programs to incorporate diabetes education across the continuum of health provider education.	• Develop educational strategies to continuously maintain current knowledge and skills on diabetes and the use of clinical practice guidelines across the health continuum. • Collaborate and network with other professionals to develop innovative and integrated education initiatives/programs for individuals affected by diabetes and other chronic diseases across the health continuum. • Collaborate and network with other professionals in the effective management of individuals with diabetes. • Facilitate appropriate and timely referrals to other professionals. • Empower individuals and families in effectively managing their diabetes.
Not-for-profit and other community organizations	• Involve and engage respective stakeholders in developing and implementing Alberta's diabetes prevention strategy. • Provide current and relevant information/education on diabetes prevention and management. • Continue to develop and support multifaceted and intersectoral approaches to diabetes and chronic disease prevention.	• Provide current and relevant information/education on diabetes prevention and management. • Advocate for the resolution of diabetes challenges and issues. • Provide networking opportunities for individuals and their families with diabetes.

Appendix F —Summary of Key Stakeholder Roles and Responsibilities

Stakeholder	Primary Prevention	Secondary/Tertiary Prevention
Corporate sector	• Provide education and counselling on healthy living and diabetes and its effective management through collaborative programs with clients and other stakeholders. • Facilitate healthy living by developing healthier affordable food choices through improved food processing approaches and accurate and informative food labels. • For pharmaceutical companies, support diabetes research, applicable clinical trials and health professional education as appropriate.	• Provide education and counselling on healthy living and diabetes and its effective management through collaborative programs with clients and other stakeholders. • For pharmaceutical companies, support diabetes research, applicable clinical trials and health professional education as appropriate.
Media	• Stimulate public awareness and provide accurate information on healthy living in the prevention of diabetes.	• Partner with other stakeholders in diabetes awareness initiatives.
Municipal government	• Facilitate healthy living practices through creative and family-oriented recreational programming, provision of safe and secure walking/hiking/biking trails and expanded use of recreational facilities, including open access policies. • Develop and design connected neighbourhoods and safe communities that encourage active living. • Provide/facilitate public transportation to enable access to programs and services. • Collaborate with and support provincial and federal government initiatives in healthy living.	• Provide/facilitate public transportation to enable access to programs and services. • Collaborate with and support provincial and federal government initiatives in healthy living.

Appendix F —Summary of Key Stakeholder Roles and Responsibilities

Stakeholder	Primary Prevention	Secondary/Tertiary Prevention
Provincial government	• Prioritize, allocate dedicated funding and monitor outcomes for health promotion and disease prevention programs. • Promote healthy living studies and practices within the school environment. • Work towards expanding fiscal and human resources for healthy lifestyle programs, diabetes education and management programs to enhance access in all areas of the province. • Provide appropriate resources to active living agencies to support the delivery of multi-sector programs and services. • Renew the Alberta Active Living Strategy and develop an integrated, multi-sector implementation and accountability framework. • Continue to collaborate with other provincial government departments to monitor the Alberta Active Living Strategy and disseminate active living information. • Continue to liase with Health Canada and national stakeholders to coordinate the provincial implementation and dissemination of active living and healthy eating programs, services, and resources. • Provide appropriate resources to provincial sport, recreation, active living and healthy eating associations to support the delivery of local opportunities to be active. • Support the development of recreation infrastructure including facilities and trails. • Promote public policies and effective strategies to develop and enhance financial support programs for low-income families. • Promote and support funding for universities and other research bodies to conduct progressive research programs in the prevention, management and surveillance of diabetes.	• Expand fiscal and human resources for healthy lifestyle programs, diabetes education and management programs to enhance access in all areas of the province. • Collaborate with and support federal government initiatives in healthy living, diabetes prevention and management. • Facilitate and/or conduct research on leading practices for diabetes prevention and management, including new treatment modalities. • Work towards expanding eligibility and financial assistance programs for diabetes-related supplies, including education on their use, especially for low-income families. • Enhance information systems for effective diabetes surveillance and program planning and evaluation. • Promote public policies and effective strategies to develop and enhance financial support programs for low-income families. • Promote and support funding for universities and other research bodies to conduct progressive research programs in the prevention, management and surveillance of diabetes.

Appendix F —Summary of Key Stakeholder Roles and Responsibilities

Stakeholder	Primary Prevention	Secondary/Tertiary Prevention
Federal government	• Promote the population health approach. • Develop/expand policies and resources for healthy living. • Facilitate and/or conduct research on leading practices for diabetes prevention and management, including new treatment modalities. • Provide incentives (e.g., healthy public policies, regulations/taxes regarding unhealthy foods) and tax deductions and exemptions (e.g., healthy foods, sporting equipment) to encourage healthy living. • Support the creation and maintenance of up-to-date Clinical Practice Guidelines for diabetes primary, secondary and tertiary prevention. • Prioritize and allocate dedicated funding for health promotion and disease prevention programs such as the Aboriginal Diabetes Initiative. • Support and further enhance the National Diabetes Surveillance Program.	• Facilitate and/or conduct research on leading practices for diabetes prevention and management, including new treatment modalities. • Support the creation and maintenance of up-to-date Clinical Practice Guidelines for diabetes primary, secondary and tertiary prevention. • Support and further enhance the National Diabetes Surveillance Program.

Appendix G

Stakeholder Roles and Responsibilities

Appendix G — Stakeholder Roles and Responsibilities

As noted earlier, numerous entities have a stake in diabetes prevention in Alberta. Given the major risk factors for diabetes and the multitude of other factors influencing one's overall health and well being, an intersectoral and integrated approach is necessary to effectively address diabetes prevention. Multiple stakeholders are identified for the same or similar strategies. This reinforces the expectations of an integrated and collaborative approach given that no one stakeholder "owns" diabetes.

The following key stakeholder roles and responsibilities were derived from the diabetes consultation sessions, a consultation meeting with regional health authorities (RHA) and deliberations held by the Alberta Diabetes Prevention Strategy Working Group. Validation of stakeholder roles and responsibilities was also obtained from those stakeholders not represented on the Working Group. The generic roles and responsibilities identified in this section also pertain to diabetes prevention and management services for the Aboriginal population.

Individuals and families

- Accept responsibility for lifestyle practices by becoming knowledgeable about and applying healthy living practices.
- Serve as effective role models and encourage healthy living practices.
- Accept responsibility for effective diabetes self-care by becoming knowledgeable about their diabetes conditions and the requirements for healthy eating, physical activity, testing and medication.
- Seek new information to continuously learn about healthy living and the management of diabetes for those affected by diabetes.
- Support necessary changes to enable healthy living and healthy lifestyles for those with diabetes.
- Facilitate development of and participate in support groups and other helping and educational networks.

Communities, including the education system and employers

- Supply and/or facilitate the necessary supports and resources to enable healthy living.
- Review/re-institute/expand policies, programs and incentives in the school system to encourage healthy living practices.
- Develop/expand policies, programs and incentives in the workplace to encourage healthy living practices.
- Supply and/or facilitate the necessary supports and resources to enable healthy lifestyles for those with diabetes.
- Support necessary changes to enable healthy living and healthy lifestyles for those with diabetes.

Regional health authorities

- Develop regional diabetes prevention model/framework/strategy consistent with the provincial diabetes prevention strategy and incorporate the strategy into the RHA business plan and accountability framework.
- Develop and implement an integrated population health approach in addressing diabetes and chronic disease prevention.
- Develop healthy living strategies and innovative and sustainable programs based on the population health approach and apply across the health continuum.
- Develop, promote and support programs, which promote healthy eating and physical activity to prevent diabetes.

Appendix G — Stakeholder Roles and Responsibilities

- Prioritize and allocate funding for accessible and sustainable health promotion and disease prevention programs in collaboration with other stakeholders, including community members to address the determinants of health.
- Provide content expertise for a coordinated approach to public awareness and education, including behavioural change theories and current evidence-based information.
- Provide necessary support systems required to implement an effective regional diabetes strategy.
- Designate individual employees or groups to assume responsibility for diabetes prevention initiatives.
- Collaborate with health professionals and other community organizations in the provision of programs and services aimed at health determinants and the impact on healthy living.
- Collaborate with other stakeholders in the provision and evaluation of healthy living programs and resources.
- Provide education to health professionals on the population health approach and the impact of the health determinants on health.
- Develop and implement an integrated population health approach in the management of diabetes.
- Provide/expand accessible diabetes education and management programs and initiatives.
- Focus on the special needs of those with diabetes and develop specific programs and initiatives to meet those needs.
- Pursue opportunities to form partnerships with other sectors to provide shared services.
- Collaborate with other stakeholders in the provision and evaluation of innovative and evidence-based programs and services directed at effective diabetes education and management.
- Facilitate self-care and responsibility by developing tools to enable consumers to access and evaluate health information, including Internet information.
- Promote use of the most current clinical practice guidelines.

Health professionals[39]

- Recognize the importance of addressing diabetes at all levels of prevention—primary, secondary and tertiary.
- Develop educational strategies to continuously maintain current knowledge and skills on healthy living, the population health approach and the application of healthy public policy.
- Develop, promote and support programs that promote healthy eating and physical activity to prevent diabetes.
- Develop healthy living strategies and innovative and sustainable programs based on the population health approach and apply across the continuum.
- Continue to promote multifaceted and intersectoral approaches to diabetes and chronic disease prevention.
- Develop processes to coordinate, inform and educate diabetes health professionals on the use of interdisciplinary team approaches.
- Develop educational strategies and programs to incorporate diabetes education across the continuum of health provider education.

- Develop educational strategies to continuously maintain current knowledge and skills on diabetes and the use of clinical practice guidelines across the health continuum.
- Collaborate and network with other professionals to develop innovative and integrated education initiatives/programs for individuals affected by diabetes and other chronic diseases across the health continuum.
- Collaborate and network with other professionals in the effective management of individuals with diabetes.
- Facilitate appropriate and timely referrals to other professionals.
- Empower individuals and families to effectively manage their diabetes.

Not-for-profit and other community organizations[40]

- Involve and engage respective stakeholders in developing and implementing Alberta's diabetes prevention strategy.
- Provide current and relevant information/education on diabetes prevention and management.
- Continue to develop and support multifaceted and intersectoral approaches to diabetes and chronic disease prevention.
- Advocate for the resolution of diabetes challenges and issues.
- Provide networking opportunities for individuals and their families with diabetes.

Corporate Sector

- Provide education and counselling to Albertans on healthy living and diabetes and its effective management through collaborative programs with clients and other stakeholders.
- Facilitate healthy living by developing healthier affordable food choices through improved food processing approaches and accurate and informative food labels.
- For pharmaceutical companies, support diabetes research, applicable clinical trials and health professional education as appropriate.

Media

- Stimulate public awareness and provide accurate information on healthy living in the prevention of diabetes.
- Partner with other stakeholders in diabetes awareness initiatives.

Municipal government

- Facilitate healthy living practices through creative and family-oriented recreational programming, provision of safe and secure walking/hiking/biking trails and expanded use of recreational facilities, including open access policies.
- Develop and design connected neighbourhoods and safe communities that encourage active living.
- Provide/facilitate public transportation to enable access to programs and services.
- Collaborate with and support provincial and federal government initiatives in healthy living.

Appendix G — Stakeholder Roles and Responsibilities

Provincial government

- Prioritize, allocate dedicated funding and monitor outcomes for health promotion and disease prevention programs.
- Promote healthy living studies and practices within the school environment.
- Work towards expanding fiscal and human resources for healthy lifestyle programs, diabetes education and management programs to enhance access in all areas of the province.
- Promote public policies and effective strategies to develop and enhance financial support programs for low-income families.
- Provide appropriate resources to active living agencies to support the delivery of multi-sector programs and services.
- Renew the Alberta Active Living Strategy[41] and develop an integrated, multi-sector implementation and accountability framework.
- Continue to collaborate with other provincial government departments to monitor the Alberta Active Living Strategy and disseminate active living information.
- Continue to liase with Health Canada and national stakeholders to coordinate the provincial implementation and dissemination of active living and healthy eating programs, services, and resources.
- Provide appropriate resources to provincial sport, recreation, active living and healthy eating associations to support the delivery of local opportunities to be active.
- Support the development of recreation infrastructure including facilities and trails.
- Collaborate with and support federal government initiatives in healthy living, diabetes prevention and management.
- Facilitate and/or conduct research on leading practices for diabetes prevention and management, including new treatment modalities.
- Work towards expanding eligibility and financial assistance programs for diabetes-related supplies, including education on their use, especially for low-income families.
- Enhance information systems for effective diabetes surveillance and program planning and evaluation.
- Promote and support funding for universities and other research bodies to conduct progressive research programs in the prevention, management and surveillance of diabetes.

Federal government

- Promote the population health approach.
- Develop/expand policies and resources for healthy living.
- Facilitate and/or conduct research on leading practices for diabetes prevention and management, including new treatment modalities.
- Provide incentives (e.g., healthy public policies, regulations/taxes regarding unhealthy foods) and tax deductions and exemptions (e.g., healthy foods, sporting equipment) to encourage healthy living.

- Support the creation and maintenance of up-to-date Clinical Practice Guidelines for diabetes primary, secondary and tertiary prevention.
- Prioritize and allocate dedicated funding for health promotion and disease prevention programs such as the Aboriginal Diabetes Initiative.
- Support and further enhance the National Diabetes Surveillance Program.

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[39]Health professionals include physicians, nurses, dietitians, social workers, and pharmacists.

[40]Organisations include Canadian Diabetes Association, Dietitians of Canada, and Active Lifestyles Portfolio. The Active Lifestyles Portfolio is designated to promote and encourage Albertans to lead active, healthy lifestyles and includes following organisations: Alberta Centre for Active Living, Be Fit for Life Network (eight regional centres), Schools Come Alive, Alberta Fitness Leadership Certification Association, Alberta Fitness Appraisal Certification and Accreditation Program. http://provincialfitnessunit.ualberta.ca/alp/index.html. Accessed 3 March 2002.

[41] Alberta Active Living Strategy. http://www.cd.gov.ab.ca/asrpwf/programs/active/strategy/index.asp. Accessed 21 April 2002.

Appendix H

Description of Health Determinants

Appendix H—Description of Health Determinants

Health Determinant	Underlying Premises
Income and social status	Health status improves at each step up the income and social hierarchy. High income determines living conditions such as safe housing and ability to buy sufficient good food. The healthiest populations are those in societies, which are prosperous and have an equitable distribution of wealth. Considerable research indicates that the degree of control people have over life circumstances, especially stressful situations, and their discretion to act are the key influences. Higher income and status generally results in more control and discretion. The biological pathways for how this could happen are becoming better understood. A number of recent studies show that limited options and poor coping skills for dealing with stress increase vulnerability to a range of diseases through pathways that involve the immune and hormonal systems.
Social support networks	Support from families, friends and communities is associated with better health. Such social support networks could be very important in helping people solve problems and deal with adversity, as well as in maintaining a sense of mastery and control over life circumstances. The caring and respect that occurs in social relationships, and the resulting sense of satisfaction and well being, seem to act as a buffer against health problems.
Education	Health status improves with level of education. Education is closely tied to socio-economic status, and effective education for children and lifelong learning for adults are key contributors to health and prosperity by equipping people with knowledge and skills for problem solving, and helps provide a sense of control and mastery over life circumstances. It increases opportunities for job and income security, and job satisfaction. And it improves people's ability to access and understand information to help keep them healthy.
Employment and working conditions	Unemployment, underemployment, stressful or unsafe work are associated with poorer health. People who have more control over their work circumstances and fewer stress related demands of the job are healthier and often live longer than those in more stressful or riskier work and activities.
Social environment	The importance of social support also extends to the broader community. Civic vitality refers to the strength of social networks within a community, region, province or country. It is reflected in the institutions, organizations and informal giving practices that people create to share resources and build attachments with others. The array of values and norms of a society influence in varying ways the health and well being of individuals and populations. In addition, social stability, recognition of diversity, safety, good working relationships, and cohesive communities provide a supportive society that reduces or avoids many potential risks to good health.

Appendix H—Description of Health Determinants

Health Determinant	Underlying Premises
Physical environment	The physical environment is an important determinant of health. At certain levels of exposure, contaminants in our air, water, food and soil can cause a variety of adverse health effects, including cancer, birth defects, respiratory illness and gastrointestinal ailments. In the built environment, factors related to housing, indoor air quality and the design of communities and transportation systems could significantly influence our physical and psychological well being.
Biology and genetic endowment	The basic biology and organic make-up of the human body are a fundamental determinant of health. Genetic endowment provides an inherited predisposition to a wide range of individual responses that affect health status. Although socio-economic and environmental factors are important determinants of overall health, in some circumstances genetic endowment appears to predispose certain individuals to particular diseases or health problems.
Personal health practices and coping skills	Personal health practices and coping skills refer to those actions by which individuals can prevent diseases and promote self-care, cope with challenges, and develop self-reliance, solve problems and make choices that enhance health. However, there is a growing recognition that personal life "choices" are greatly influenced by the socio-economic environments in which people live, learn, work and play. Through research in areas such as heart disease and disadvantaged childhood, there is more evidence that powerful biochemical and physiological pathways link the individual socio-economic experience to vascular conditions and other adverse health events.
Healthy child development	New evidence on the effects of early experiences on the brain development, school readiness and health in later life has sparked a growing consensus about early child development as a powerful determinant of health in its own right. At the same time, we have been learning more about how all of the other determinants of health affect the physical, social, mental, emotional and spiritual development of children and youth. For example, a young person's development is greatly affected by his or her housing and neighbourhood, family income and level of parents education, access to nutritious foods and physical recreation, genetic makeup and access to dental and medical care.
Health services	Health services, particularly those designed to maintain and promote health, to prevent disease, and to restore health and function contribute to population health. The health services continuum of care includes management and secondary prevention.
Culture	Some persons or groups may face additional risks due to a socio-economic environment, which is largely determined by dominant cultural values that contribute to the perpetuation of conditions such as marginalization, stigmatism, loss or devaluation of language and culture and lack of access to culturally appropriate health care and services.
Gender	Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. "Gendered" norms influence the health system's practices and priorities. Many health issues are a function of gender-based social status or roles.